DCR-TRV120/TRV120E/TRV120P/TRV125E/ TR8000E/TR8100E

RMT-814

SERVICE MANUAL

Self Diagnosis
Supported model

Ver 1.3 2001. 10

US Model
Canadian Model
DCR-TRV120
AEP Model
DCR-TRV120E/TRV125E/TR8000E/TR8100E
UK Model
East European Model
North European Model
Russian Model
DCR-TRV120E/TR8000E
E Model
DCR-TRV120/TRV120E/TRV120P
Hong Kong Model
DCR-TRV120/TRV120E
Korea Model
DCR-TRV120P
Argentina Model
DCR-TRV120P
Brazilian Model
DCR-TRV120
Australian Model
Chinese Model
DCR-TRV120E
Tourist Model
DCR-TRV120/TRV120E

Digital Handycam

InfoLITHIUM

B700 MECHANISM

450×
Digital8
SONY
Digital Handycam

Photo: DCR-TRV120

NTSC MODEL : DCR-TRV120/TRV120P
PAL MODEL : DCR-TRV120E/TRV125E/TR8000E/TR8100E

For MECHANISM ADJUSTMENT, refer to the "8mm Video MECHANICAL ADJUSTMENT MANUAL Ⅶ " (9-973-801-11).

SPECIFICATIONS

Video camera recorder

System

Video recording system
2 rotary heads
Helical scaning system
Audio recording system
Rotary heads, PCM system
Quantization: 12 bits (Fs 32 kHz, stereo 1, stereo 2), 16 bits (Fs 48 kHz, stereo)
Video signal
DCR-TRV120/TRV120P:
NTSC color, EIA standards
DCR-TRV120E/TRV125E /TR8000E/TR8100E :
PAL colour, CCIR standards
Recommended cassette
Hi8/Digital8 video cassette
Recording/playback time (using 120 min. Hi8 video cassette)
SP mode: 1 hour
LP mode: 1 hour and 30 minuites
Fastforward/rewind time (using 120 min. Hi8 video cassette)
Approx. 5 min.
Viewfinder
Electric Viewfinder (monochrome)
Image device
1/4 type CCD (Charge Coupled Device)
DCR-TRV120/TRV120P:
Approx. 460,000 pixels
(Effective: Apporx. 290,000 pixels)
DCR-TRV120E/TRV125E/ TR8000E/TR8100E:
Approx. 800,000 pixels
(Effective: Approx. 400,000 pixels)
Lens
Combined power zoom lens
Filter diameter 37 mm (1 1/2 in.)
25× (Optical)
DCR-TRV120/TRV120E: E, AUS, HK, CN, JE/TRV120P:
450×(Digital)
DCR-TRV120E: AEP, UK, EE, NE, RU/ DCR-TR8000E
100× (Digital)
DCR-TRV125E/TR8100E:
125× (Digital)
Focal length
3.7 - 92.5 mm (5/32 - 3 3/4 in.)
When converted to a 35 mm still camera
48 - 1200 mm (1 15/16 - 47 1/4 in.)
Colour temperature
Auto
Minimum illumination
DCR-TRV120/TRV120P:
1 lux (F 1.6)
DCR-TRV120E/TRV125E /TR8000E/TR8100E:
3 lux (F 1.6)
0 lux (in the NightShot mode)*
* Objects unable to be seen due to the dark can be shot with infrared lighting.

Input/output connectors

DCR-TRV120/TRV120P:
S video input/output
4-pin mini DIN
Luminance signal: 1 Vp-p, 75 ohms, unbalanced
Chrominance signal: 0.286 Vp-p, 75 ohms, unbalanced
Audio/Video input/output
AV MINIJACK, 1 Vp-p, 75 ohms, unbalanced, sync negative
327 mV, (at output impedance more than 47 kilohms)
Output impedance with less than 2.2 kilohms/Stereo minijack (ø 3.5 mm)
Input impedance more than 47 kilohms
DCR-TRV120E/TRV125E:
S video input/output
4-pin mini DIN
Luminance signal: 1 Vp-p, 75 ohms, unbalanced
Chrominance signal: 0.3 Vp-p, 75 ohms, unbalanced
Audio/Video output
AV MINIJACK, 1 Vp-p, 75 ohms, unbalanced, sync negative
327 mV, (at output impedance more than 47 kilohms)
Output impedance with less than 2.2 kilohms/Stereo minijack (ø 3.5 mm)
DCR-TR8000E/TR8100E:
S video output
4-pin mini DIN
Luminance signal: 1 Vp-p, 75 ohms, unbalanced
Chrominance signal: 0.3 Vp-p, 75 ohms, unbalanced
Audio/Video output
AV MINIJACK, 1 Vp-p, 75 ohms, unbalanced, sync negative
327 mV, (at output impedance more than 47 kilohms)
Output impedance with less than 2.2 kilohms/Stereo minijack (ø 3.5 mm)
DCR-TRV120/TRV120P:
i DV input/output
4-pin connector
DCR-TRV120E/TRV125E/ TR8000E/TR8100E:
i DV output
4-pin connector
Headphone jack
Stereo minijack (ø 3.5 mm)
LANC control jack
Stereo mini-minijack (ø 2.5 mm)
Transfer rate: Max 115.2 Kbps
DCR-TRV120/TRV120P/ TRV120E/TRV125E:
RS-232C based

– Continued on next page –

Digital 8 DIGITAL VIDEO CASSETTE RECORDER

SONY®

MIC jack
Stereo minijack (ø 3.5 mm)

DCR-TRV120/TRV120E: E, AUS, CN, HK, JE/TRV120P:

LCD screen

Picture
2.5 inches measured diagonally
50.3 × 37.4 mm (2 × 1 1/2 in.)
Total dot number
61,600 (280 × 220)

DCR-TRV120E: AEP, UK, EE, NE, RU/TRV125E:

LCD screen

Picture
2.5 inches measured diagonally
50.3 × 37.4 mm (2 × 1 1/2 in.)
Total dot number
123,200 (560 × 220)

General

Power requirements
7.2 V (battery pack)
8.4 V (AC power adaptor)
Average power consumption (when using the battery pack)
DCR-TRV120/TRV120P:
During camera recording using LCD
3.5 W
Viewfinder
3.1 W
DCR-TRV120E/TRV125E:
During camera recording using LCD
3.6 W
Viewfinder
3.2 W
DCR-TR8000E/TR8100E:
During camera recording
3.1 W
Operating temperature
0 °C to 40 °C (32 °F to 104 °F)
Storage temperature
–20 °C to +60 °C (–4 °F to +140 °F)
Dimensions (Approx.)
4 1/4 × 4 1/4 × 9 1/4 in.
(107 × 106 × 233 mm) (w/h/d)
Mass (approx.)
DCR-TRV120/TRV120P/TRV120E/TRV125E:
930 g (2 lb)
DCR-TR8000E/TR8100E:
860 g (1 lb 14 oz)
excluding the battery pack, lithium battery, cassette and shoulder strap
DCR-TRV120/TRV120P/TRV120E/TRV125E:
1.1 kg (2 lb 1 oz)
DCR-TR8000E/TR8100E:
1 kg (2 lb 3 oz)
including the battery pack
DCR-TRV120/TRV120P:
NP-F330, lithium battery CR2025, 120min. Hi8 cassette, and shoulder strap
DCR-TRV120E/TRV125E:
NP-F330 or F550, lithium battery CR2025, 120 min. Hi8 cassette, and shoulder strap
DCR-TR8000E/TR8100E:
NP-F330 or F550, lithium battery CR2025, 90 min. Hi8 cassette, and shoulder strap

AC power adaptor

Power requirements
100 - 240 V AC, 50/60 Hz
Power consumption
23 W
Output voltage
DC OUT: 8.4 V, 1.5 A in the operating mode
Operating temperature
0 °C to 40 °C (32 °F to 104 °F)
Storage temperature
–20 °C to +60 °C (–4 °F to +140 °F)
Dimensions (approx.)
125 × 39 × 62 mm
(5 × 1 9/16 × 2 1/2 in.) (w/h/d)
excluding projecting parts
Mass (approx.)
280 g (9.8 oz)
excluding power cord

Battery pack

Output voltage
DC 7.2 V
Capacity
DCR-TRV120/TRV120P:
NP-F330: 5.0 Wh
DCR-TRV120E/TRV125E/TR8000E/TR8100E:
NP-F330: 5.0 Wh
NP-F550: 10.8 Wh
Dimensions (approx.)
38 × 21 × 71 mm
(1 9/16 × 13/16 × 2 7/8 in.)
(w/h/d)
Mass (approx.)
95 g (3.4 oz)
Type
Lithium ion

Design and specifications are subject to change without notice.

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ OR DOTTED LINE WITH MARK ⚠ ON THE SCHEMATIC DIAGRAMS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AU COMPOSANT AYANT RAPPORT À LA SÉCURITÉ!

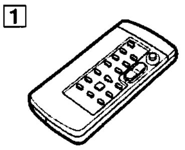
LES COMPOSANTS IDENTIFIÉS PAR UNE MARQUE ⚠ SUR LES DIAGRAMMES SCHÉMATIQUES ET LA LISTE DES PIÈCES SONT CRITIQUES POUR LA SÉCURITÉ DE FONCTIONNEMENT. NE REMPLACER CES COMPOSANTS QUE PAR DES PIÈCES SONY DONT LES NUMÉROS SONT DONNÉS DANS CE MANUEL OU DANS LES SUPPLÉMENTS PUBLIÉS PAR SONY.

SAFETY CHECK-OUT

After correcting the original service problem, perform the following safety checks before releasing the set to the customer.

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
4. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
5. Check the B+ voltage to see it is at the values specified.
6. Flexible Circuit Board Repairing
   - Keep the temperature of the soldering iron around 270 ˚C during repairing.
   - Do not touch the soldering iron on the same conductor of the circuit board (within 3 times).
   - Be careful not to apply force on the conductor when soldering or unsoldering.

Supplied accessories

1


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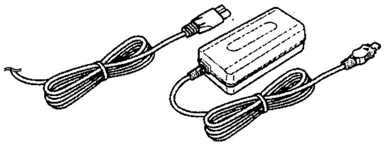

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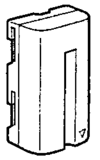
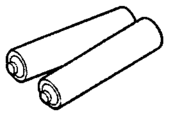


4

5


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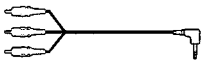
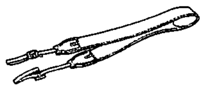
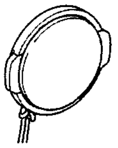
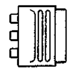
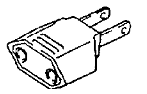
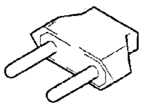


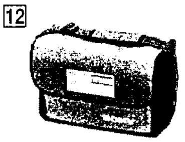
7


8


9


10


11


12


1 **Wireless Remote Commander** (1)
2 **AC-L10A/L10B/L10C AC power adaptor** (1), **Mains lead** (1)
3 **NP-F330 battery pack** (1)
DCR-TRV120/TRV120E/TRV120P/TR8000E
NP-F550 battery pack (1)
DCR-TRV125E/TR8100E
4 **CR2025 lithium battery** (1)
The lithium battery is already installed in your camcorder.
5 **R6 (Size AA) battery for Remote Commander** (2)
6 **A/V connecting cable** (1)
7 **Shoulder strap** (1)
8 **Lens cap** (1)
9 **21-pin adaptor** (1)
DCR-TRV120E: AEP, UK, EE, NE, RU/TRV125E
10 **2-pin conversion adaptor (1)**
DCR-TRV120: E, HK, BR/TRV120: E, HK
11 **2-pin conversion adaptor (1)**
DCR-TRV120: JE/TRV120E: JE
12 **Carrying bag (1)**
DCR-TRV120P

Table for differences of function

Model	DCR-TRV120	DCR-TRV120P	DCR-TRV120E		DCR-TRV125E	DCR-TR8000E	DCR-TR8100E
Destination	US, CND, E, HK, KR, BR, JE	E, AR	AEP, UK, EE, NE, RU	E, AUS, HK, CN, JE	AEP	AEP, UK, EE, NE, RU	AEP
Color system	NTSC		PAL	PAL	PAL	PAL	PAL
Digital zoom	450×		100×	450×	125×	100×	125×
CCD imager	720H		960H	960H	960H	960H	960H
MONITOR IN	○		○	○	○	×	×
VTR REC	○		×	○	×	×	×
LCD type	TYPE S		TYPE S	TYPE C	TYPE S	×	×
LCD (pixel)	61k		123k	61k	123k	×	×
CD board	CD-242		CD-244	CD-244	CD-244	CD-269	CD-269
CF board	CF-69		CF-69	CF-69	CF-69	CF-71	CF-71
FU board	FU-138		FU-138	FU-138	FU-138	FU-143	FU-143
PD board	PD-117		PD-117	PD-117	PD-117	×	×
SE board	SE-104		SE-104	SE-104	SE-104	SE-113	SE-113

- Abbreviation

AR : Argentina model
AUS : Australian model
BR : Brazilian model
CN : Chinese model
CND : Canadian model
EE : East European model
HK : Hong Kong model
JE : Tourist model
KR : Korea model
NE : North European model
RU : Russian model

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* The optical axis frame is shown on page 251.
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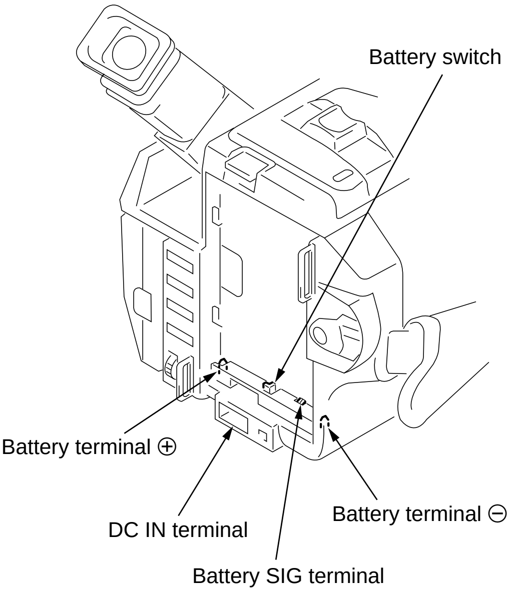
The parts reference sheet is shown on page 253.

SERVICE NOTE

1. POWER SUPPLY DURING REPAIRS


Battery switch
Battery terminal ⊕
DC IN terminal
Battery terminal ⊖
Battery SIG terminal

In this unit, about 10 seconds after power is supplied (8.4 V) to the battery terminal using the service power cord (J-6082-223-A), the power is shut off so that the unit cannot operate.
This following two methods are available to prevent this. Take note of which to use during repairs.

Method 1.

Connect the servicing remote commander RM-95 (J-6082-053-B) to the LANC jack, and set the remote commander switch to the "ADJ" side.

Method 2.

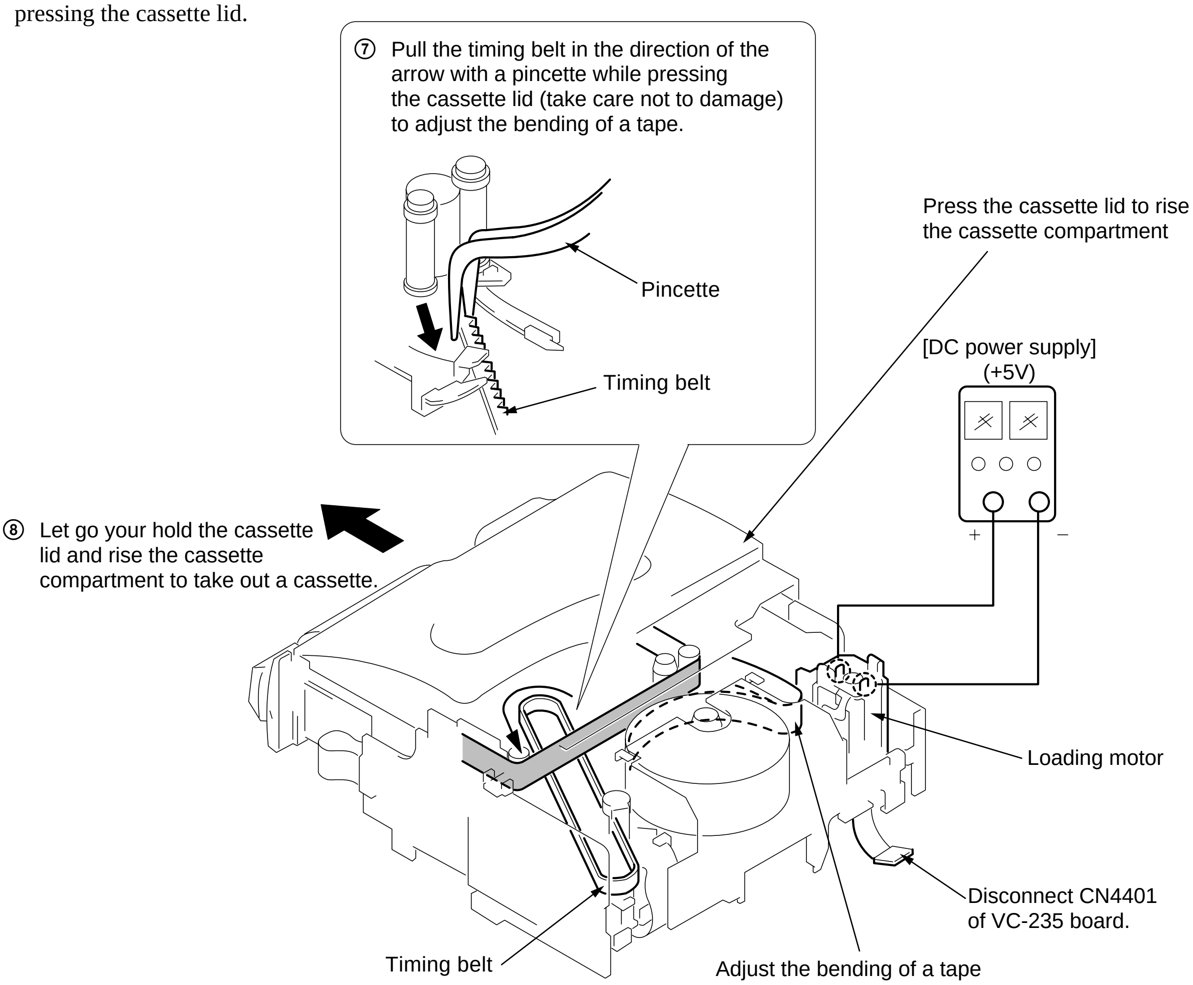
Press the battery switch of the battery terminal using adhesive tape, etc.

Method 3.

Use the DC IN terminal. (Use the AC power adaptor.)

2. TO TAKE OUT A CASSETTE WHEN NOT EJECT (FORCE EJECT)

① Refer to 2-2 to remove the front panel assembly.
② Refer to 2-4 to remove the cabinet (R) assembly.
③ Refer to 2-10 to remove the battery panel assembly.
④ Refer to 2-11 to remove the cabinet (L) assembly.
⑤ Disconnect CN4401 of VC-235 board.
⑥ Add +5 V from the DC POWER SUPPLY and unload with a pressing the cassette lid.



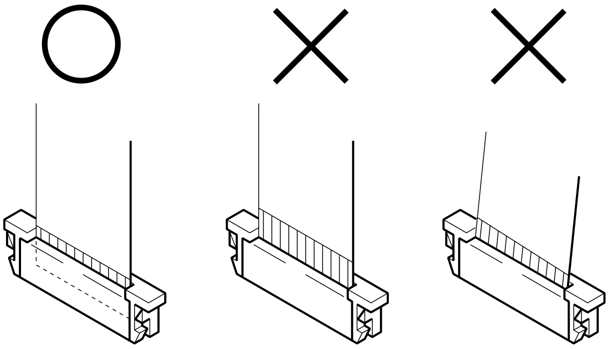
⑦ Pull the timing belt in the direction of the arrow with a pincette while pressing the cassette lid (take care not to damage) to adjust the bending of a tape.

⑧ Let go your hold the cassette lid and rise the cassette compartment to take out a cassette.

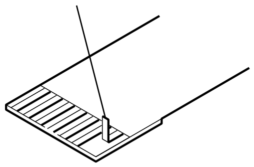
Pincette
Timing belt
Press the cassette lid to rise the cassette compartment
[DC power supply] (+5V)
+
−
Loading motor
Disconnect CN4401 of VC-235 board.
Timing belt
Adjust the bending of a tape

3. NOTE FOR REPAIR

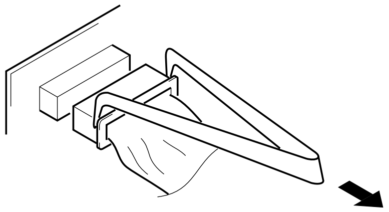
Make sure that the flat cable and flexible board are not cracked of bent at the terminal.
Do not insert the cable insufficiently nor crookedly.



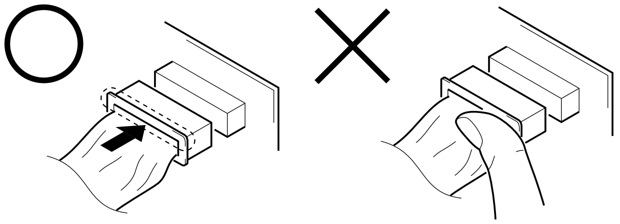
Cut and remove the part of gilt which comes off at the point.
(Take care that there are some pieces of gilt left inside)



When remove a connector, don't pull at wire of connector.
Be in danger of the snapping of a wire.



When installing a connector, don't press down at wire of connector.
Be in danger of the snapping of a wire.



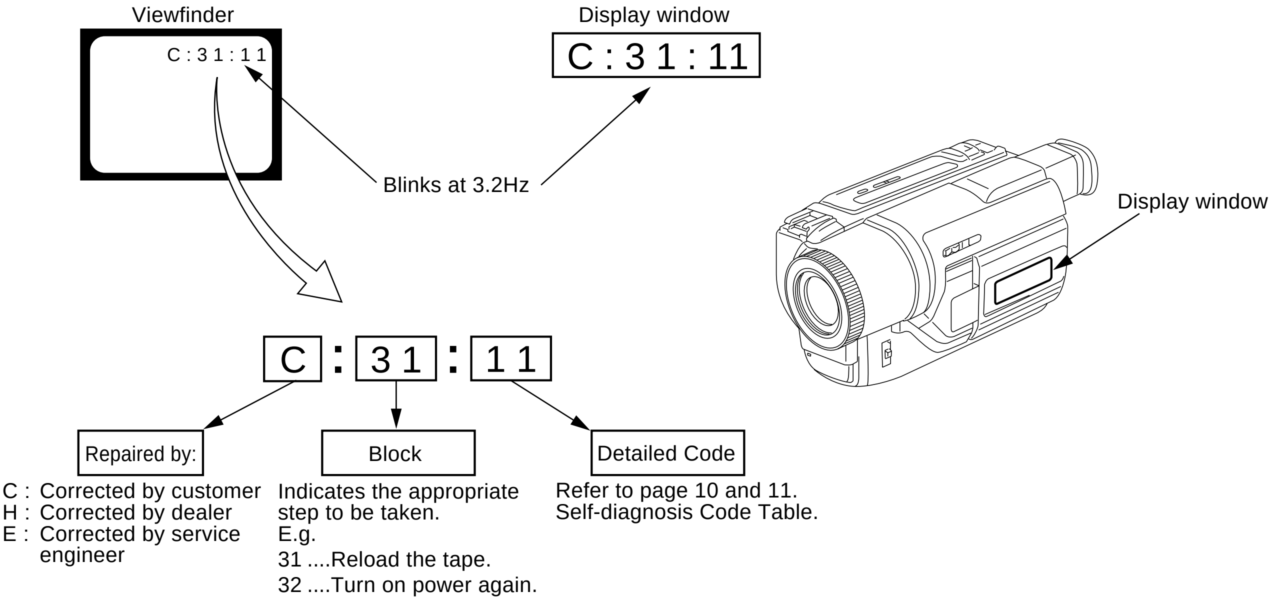
SELF-DIAGNOSIS FUNCTION

1. Self-diagnosis Function

When problems occur while the unit is operating, the self-diagnosis function starts working, and displays on the viewfinder or Display window what to do. This function consists of two display; self-diagnosis display and service mode display.
Details of the self-diagnosis functions are provided in the Instruction manual.

2. Self-diagnosis Display

When problems occur while the unit is operating, the counter of the viewfinder or Display window shows a 4-digit display consisting of an alphabet and numbers, which blinks at 3.2 Hz. This 5-character display indicates the "repaired by:", "block" in which the problem occurred, and "detailed code" of the problem.

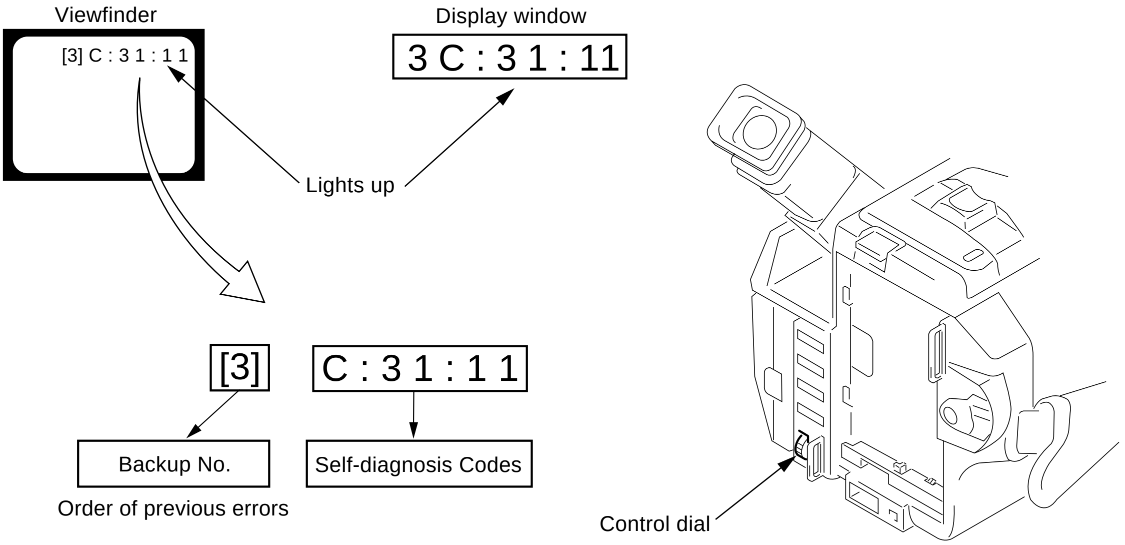

Viewfinder
C : 3 1 : 1 1
Display window
C : 3 1 : 11
Blinks at 3.2Hz
Display window
C : 3 1 : 1 1
Repaired by:
Block
Detailed Code
C : Corrected by customer
H : Corrected by dealer
E : Corrected by service engineer
Indicates the appropriate step to be taken.
E.g.
31 ....Reload the tape.
32 ....Turn on power again.
Refer to page 10 and 11.
Self-diagnosis Code Table.

3. Service Mode Display

The service mode display shows up to six self-diagnosis codes shown in the past.

3-1. Display Method

While pressing the "STOP" key, set the switch from OFF to "VTR or PLAYER", and continue pressing the "STOP" key for 5 seconds continuously. The service mode will be displayed, and the counter will show the backup No. and the 5-character self-diagnosis codes.


Viewfinder
[3] C : 3 1 : 1 1
Display window
3 C : 3 1 : 11
Lights up
[3]
C : 3 1 : 1 1
Backup No.
Self-diagnosis Codes
Order of previous errors
Control dial

3-2. Switching of Backup No.

By rotating the control dial, past self-diagnosis codes will be shown in order. The backup No. in the [] indicates the order in which the problem occurred. (If the number of problems which occurred is less than 6, only the number of problems which occurred will be shown.)

[1] : Occurred first time
[2] : Occurred second time
[3] : Occurred third time
[4] : Occurred fourth time
[5] : Occurred fifth time
[6] : Occurred the last time

3-3. End of Display

Turning OFF the power supply will end the service mode display.

Note: The "self-diagnosis display" data will be backed up by the coin-type lithium battery (CF-69/71 board BH001). When this coin-type lithium battery is disconnected, the "self-diagnosis display" data will be lost by initialization.

4. Self-diagnosis Code Table

Self-diagnosis Code			Symptom/State	Correction
Repaired by:	Block Function	Detailed Code		
C	2 1	0 0	Condensation.	Remove the cassette, and insert it again after one hour.
C	2 2	0 0	Video head is dirty.	Clean with the optional cleaning cassette.
C	2 3	0 0	Non-standard battery is used.	Use the InfoLITHIUM battery.
C	3 1	1 0	LOAD direction. Loading does not complete within specified time	Load the tape again, and perform operations from the beginning.
C	3 1	1 1	UNLOAD direction. Loading does not complete within specified time	Load the tape again, and perform operations from the beginning.
C	3 1	2 0	T reel side tape slacking when unloading.	Load the tape again, and perform operations from the beginning.
C	3 1	2 1	S reel side tape slacking when unloading.	Load the tape again, and perform operations from the beginning.
C	3 1	2 2	T reel fault.	Load the tape again, and perform operations from the beginning.
C	3 1	2 3	S reel fault.	Load the tape again, and perform operations from the beginning.
C	3 1	3 0	FG fault when starting capstan.	Load the tape again, and perform operations from the beginning.
C	3 1	3 1	FG fault during normal capstan operations.	Load the tape again, and perform operations from the beginning.
C	3 1	4 0	FG fault when starting drum.	Load the tape again, and perform operations from the beginning.
C	3 1	4 1	PG fault when starting drum.	Load the tape again, and perform operations from the beginning.
C	3 1	4 2	FG fault during normal drum operations.	Load the tape again, and perform operations from the beginning.
C	3 1	4 3	PG fault during normal drum operations.	Load the tape again, and perform operations from the beginning.
C	3 1	4 4	Phase fault during normal drum operations.	Load the tape again, and perform operations from the beginning.
C	3 2	1 0	LOAD direction loading motor time-out.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	1 1	UNLOAD direction loading motor time-out.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	2 0	T reel side tape slacking when unloading.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	2 1	S reel side tape slacking when unloading.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	2 2	T reel fault.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	2 3	S reel fault.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	3 0	FG fault when starting capstan.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	3 1	FG fault during normal capstan operations.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	4 0	FG fault when starting drum.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	4 1	PG fault when starting drum.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	4 2	FG fault during normal drum operations.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	4 3	PG fault during normal drum operations.	Remove the battery or power cable, connect, and perform operations from the beginning.
C	3 2	4 4	Phase fault during normal drum operations.	Remove the battery or power cable, connect, and perform operations from the beginning.

Self-diagnosis Code			Symptom/State	Correction
Repaired by:	Block Function	Detailed Code		
E	6 1	0 0	Difficult to adjust focus (Cannot initialize focus.)	Inspect the lens block focus reset sensor (Pin ⑨ of CN1551 of VC-235 board) when focusing is performed when the control dial is rotated in the focus manual mode and the focus motor drive circuit (IC1553 of VC-235 board) when the focusing is not performed. **Note:** Use the remote commander RM-95 only for the model without the focus dial.
E	6 1	1 0	Zoom operations fault (Cannot initialize zoom lens.)	Inspect the lens block zoom reset sensor (Pin ⑩ of CN1551 of VC-235 board) when zooming is performed when the zoom lens is operated and the zoom motor drive circuit (IC1553 of VC-235 board) when zooming is not performed.
E	6 2	0 0	Handshake correction function does not work well. (With pitch angular velocity sensor output stopped.)	Inspect pitch angular velocity sensor (SE201 of SE-104/113 board) peripheral circuits.
E	6 2	0 1	Handshake correction function does not work well. (With yaw angular velocity sensor output stopped.)	Inspect yaw angular velocity sensor (SE202 of SE-104/113 board) peripheral circuits.

SECTION 1
GENERAL

This section is extracted from DCR-TRV120E/
TRV125E/TRV320E instruction manual.

English

Welcome!

Congratulations on your purchase of this Sony Digital Handycam camcorder. With your Digital Handycam, you can capture life's precious moments with superior picture and sound quality.
Your Digital Handycam is loaded with advanced features, but at the same time it is very easy to use. You will soon be producing home video that you can enjoy for years to come.

WARNING

To prevent fire or shock hazard, do not expose the unit to rain or moisture.

To avoid electrical shock, do not open the cabinet.
Refer servicing to qualified personnel only.

NOTICE ON THE SUPPLIED AC POWER ADAPTOR FOR CUSTOMERS IN THE UNITED KINGDOM

A moulded plug complying with BS1363 is fitted to this equipment for your safety and convenience.

Should the fuse in the plug supplied need to be replaced, a 5 AMP fuse approved by ASTA or BSI to BS1362 (i.e., marked with ◈ or ♡ mark) must be used.

If the plug supplied with this equipment has a detachable fuse cover, be sure to attach the fuse cover after you change the fuse. Never use the plug without the fuse cover. If you should lose the fuse cover, please contact your nearest Sony service station.

ATTENTION

The electromagnetic fields at the specific frequencies may influence the picture and sound of this digital camcorder.

For the customers in Germany

Directive: EMC Directive 89/336/EEC.
92/31/EEC
This equipment complies with the EMC regulations when used under the following circumstances:
- Residential area
- Business district
- Light-industry district

(This equipment complies with the EMC standard regulations EN55022 Class B.)

Русский

Добро пожаловать!

Поздравляем Вас с приобретением данной видеокамеры Digital Handycam фирмы Sony. С помощью Вашей видеокамеры Digital Handycam Вы сможете запечатлеть дорогие Вам мгновения жизни с превосходным качеством изображения и звука.
Ваша видеокамера Digital Handycam оснащена усовершенствованными функциями, но в то же время ее очень легко использовать. Вскоре Вы будете создавать семейные видеопрограммы, которыми можете наслаждаться последующие годы.

ПРЕДУПРЕЖДЕНИЕ

Для предотвращения возгорания или опасности электрического удара не выставляйте аппарат на дождь или влагу.

Во избежание поражения электрическим током не открывайте корпус.
За обслуживанием обращаться только к квалифицированному обслуживающему персоналу.

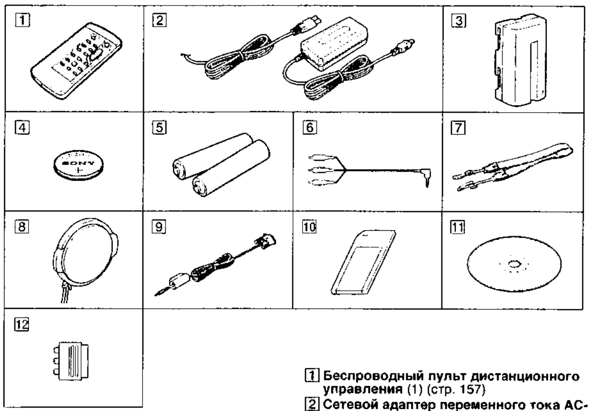
ВНИМАНИЕ

Электромагнитные поля на определенных частотах могут влиять на изображение и звук, воспроизводимое данной цифровой видеокамеры.

АЯ46

Checking supplied accessories

Make sure that the following accessories are supplied with your camcorder.



1. **Wireless Remote Commander** (1) (p. 157)
2. **AC-L10A/L10B/L10C AC power adaptor** (1), **Mains lead** (1) (p. 13)
3. **NP-F330 battery pack** (1) (p. 12, 13)
   DCR-TRV120E/TRV320E
   NP-F550 battery pack (1) (p. 12, 13)
   DCR-TRV125E only
4. **CR2025 lithium battery** (1) (p. 125)
   The lithium battery is already installed in your camcorder.
5. **R6 (Size AA) battery for Remote Commander** (2) (p. 158)
6. **A/V connecting cable** (1) (p. 38)
7. **Shoulder strap** (1) (p. 154)
8. **Lens cap** (1) (p. 21)
9. **PC serial cable** (1) (p. 112)
   DCR-TRV320E only
10. **"Memory Stick"** (1) (p. 91)
    DCR-TRV320E only
11. **Application software: PictureGear 4.1 Lite (CD-ROM)** (1) (p. 112)
    DCR-TRV320E only
12. **21-pin adaptor** (1) (p. 39)

Contents of the recording cannot be compensated if recording or playback is not made due to a malfunction of the camcorder, video tape, etc.

Проверка прилагаемых принадлежностей

Убедитесь, что следующие принадлежности прилагаются к Вашей видеокамере.

1. **Беспроводный пульт дистанционного управления** (1) (стр. 157)
2. **Сетевой адаптер переменного тока AC-L10A/L10B/L10C** (1) **провод электропитания** (1) (стр. 13)
3. **Батарейный блок NP-F330** (1) (стр. 12, 13)
   DCR-TRV120E/TRV320E
   Батарейный блок NP-F550 (1) (стр. 12, 13)
   Только DCR-TRV125E
4. **Литиевая батарейка CR2025** (1) (стр. 125)
   Литиевая батарейка уже установлена в Вашей видеокамере.
5. **Батарейка R6 (размера АА) для пульта дистанционного управления** (2) (стр. 158)
6. **Соединительный кабель аудио/видео** (1) (стр. 38)
7. **Плечевой ремень** (1) (стр. 154)
8. **Крышка объектива** (1) (стр. 21)
9. **Кабель для последовательного подсоединения к ПК** (1) (стр. 112)
   Только DCR-TRV320E
10. **"Memory Stick"** (1) (стр. 91)
    Только DCR-TRV320E
11. **Прикладное программное обеспечение: PictureGear 4.1 Lite (CD-ROM)** (1) (стр. 112)
    Только DCR-TRV320E
12. **21-штырьковый адаптер** (1) (стр. 39)

Содержание записи не может быть компенсировано в случае, если запись или воспроизведение не выполнены из-за неисправности видеокамеры, видеоленты и т.п.

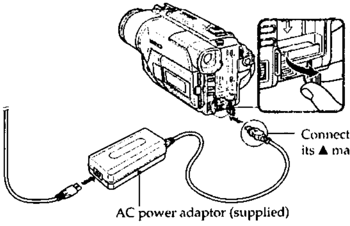
English

Quick Start Guide

This chapter introduces you to the basic features of your camcorder. See the page in parentheses "( )" for more information.

1 Connecting the mains lead (p. 18)

Use the battery pack when using your camcorder outdoors (p. 12).

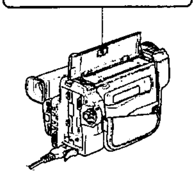

Open the DC IN jack cover.
Connect the plug with its ▲ mark facing up.
AC power adaptor (supplied)

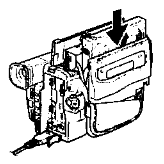
2 Inserting a cassette (p. 19)

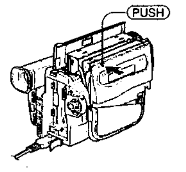
❶ Open the lid of the cassette compartment, and press EJECT. The compartment opens automatically.

❷ Insert a cassette into the cassette compartment with its window facing out and the tab on the cassette up.

❸ Close the cassette compartment by pressing the (PUSH) mark on the cassette compartment. The cassette compartment automatically goes down. Close the lid of the cassette compartment.

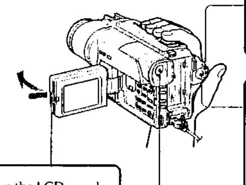




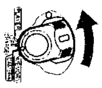


3 Recording a picture (p. 21)

❶ Remove the lens cap.

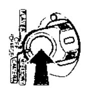


❷ Set the POWER switch to CAMERA while pressing the small green button.



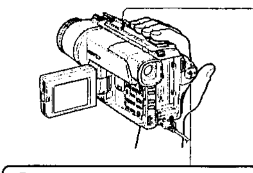
❸ Open the LCD panel while pressing OPEN. The image you are trying to shoot appears on the LCD screen

❹ Press the red button. Your camcorder starts recording. To stop recording, press the red button again.

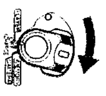


Viewfinder
When the LCD panel is closed, use the viewfinder placing your eye against its eyecup.
The picture in the viewfinder is black and white.

4 Monitoring the playback picture on the LCD screen (p. 33)



❶ Set the POWER switch to PLAYER while pressing the small green button.



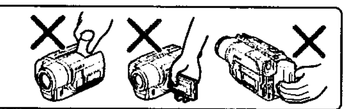
❷ Press ◀◀ to rewind the tape.

REW
◀◀

❸ Press ▶ to start playback.

PLAY
▷

Note
Do not pick up your camcorder by holding the viewfinder, the LCD panel or the battery pack.



— Getting started —

Using this manual

The instructions in this manual are for the three models listed in the table below. Before you start reading this manual and operating your camcorder, check the model number by looking at the bottom of your camcorder. The DCR-TRV320E is the model used for illustration purposes. Otherwise, the model name is indicated in the illustrations. Any differences in operation are clearly indicated in the text, for example, "DCR-TRV320E only."
As you read through this manual, buttons and settings on your camcorder are shown in capital letters.
e.g. Set the POWER switch to CAMERA.
When you carry out an operation, you can hear a beep sound to indicate that the operation is being carried out.

— Подготовка к эксплуатации —

Использование данного руководства

Инструкции в данном руководстве предназначены для три моделей, перечисленных в таблице ниже. Перед тем, как прочесть данное руководство и начать эксплуатацию Вашей видеокамеры, проверьте номер модели на нижней стороне Вашей видеокамеры. В качестве иллюстративных целей используется DCR-TRV320E. В других случаях номер модели указан на рисунках. Какие-либо расхождения в эксплуатации четко указаны в тексте, например, "только DCR-TRV320E."
При чтении данного руководства учитывайте, что кнопки и установки на видеокамере показаны заглавными буквами.
Прим. Установите выключатель POWER в положение CAMERA.
При выполнении операции на видеокамере Вы сможете услышать зуммерный сигнал, подтверждающий выполнение операции.

Types of differences/Типы различий

DCR-	TRV120E	TRV125E	TRV320E
MEMORY mark* (on the POWER switch) Знак MEMORY* (на переключателе POWER)	—	—	●
Self-timer Таймер самозапуска	—	—	●
Digital zoom Цифровой вариообъектив	100×	125×	100×

● Provided/Имеется
— Not provided/Отсутствует

* The model with MEMORY marked on the POWER switch is provided with memory functions. See page 91 for details.

Before using your camcorder

With your digital camcorder, you can use Hi8 **Hi8**/Digital8 **Ð** video cassettes. Your camcorder records and plays back pictures in the Digital8 **Ð** system. Also, your camcorder plays back tapes recorded in the Hi8 **Hi8**/standard 8 **8** (analog) system. You, however, cannot use the functions in "Advanced Playback Operations" on page 62 to 69 for playback in the Hi8 **Hi8**/standard 8 **8** system. To enable smooth transition, we recommend that you do not mix pictures recorded in the Hi8 **Hi8**/standard 8 **8** with the Digital8 **Ð** system on a tape.

* В моделях со знаком MEMORY на переключателе POWER имеются функции памяти. Подробные сведения приведены на стр. 91.

Перед началом эксплуатации Вашей видеокамеры

Для Вашей цифровой видеокамеры Вы можете использовать видеокассеты Hi8 **Hi8**/Digital8 **Ð**. Ваша видеокамера записывает и воспроизводит изображения в цифровой системе Digital8 **Ð**. Также, Ваша видеокамера воспроизводит ленты, записанные в системе Hi8 **Hi8**/8 **8** (аналоговой). Однако, Вы не можете использовать функции в разделе "Усовершенствованные операции воспроизведения" на страницах с 62 по 69 для воспроизведения в системе Hi8 **Hi8**/8 **8**. Для обеспечения плавного перехода рекомендуется не смешивать на ленте изображения, записанные в системе Hi8 **Hi8**/8 **8**, с изображениями, записанными в цифровой системе Digital8 **Ð**.

Note on TV colour systems

TV colour systems differ from country to country. To view your recordings on a TV, you need a PAL system-based TV.

Copyright precautions

Television programmes, films, video tapes, and other materials may be copyrighted. Unauthorized recording of such materials may be contrary to the provision of the copyright laws.

Precautions on camcorder care

- **The LCD screen and the viewfinder are manufactured using high-precision technology. However, there may be some tiny black points and/or bright points (red, blue, green or white) that constantly appear on the LCD screen and in the viewfinder. These points occur normally in the manufacturing process and do not affect the recorded picture in any way. Effective ratio of pixels and/or screen are 99.99% or more.**
- Do not let your camcorder get wet. Keep your camcorder away from rain and sea water. Letting your camcorder get wet may cause your camcorder to malfunction. Sometimes this malfunction cannot be repaired **[a]**.
- Never leave your camcorder exposed to temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight **[b]**.
- Do not place your camcorder so as to point the viewfinder, the LCD screen or lens toward the sun. The inside of the viewfinder, LCD screen or lens may be damaged **[c]**.

Примечание по системам цветного телевидения

Системы цветного телевидения отличаются в зависимости от страны. Для просмотра Ваших записей на экране телевизора Вам необходимо использовать телевизор, основанный на системе PAL.

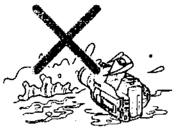
Предостережение об авторском праве

Телевизионные программы, кинофильмы, видеоленты и другие материалы могут быть защищены авторским правом. Нелицензированная запись таких материалов может противоречить положениям закона об авторском праве.

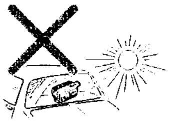
Меры предосторожности при уходе за видеокамерой

- **Экран ЖКД и видоискатель изготовлены с помощью высокопрецизионной технологии. Однако на экране ЖКД и в видоискателе могут постоянно появляться черные и/или яркие цветные точки (красные, синие, зеленые или белые). Появление этих точек вполне нормально для процесса съемки и никоим образом не влияет на записываемое изображение. Свыше 99,99% экрана предназначено для эффективного использования.**
- Не допускайте, чтобы видеокамера становилась влажной. Предохраняйте видеокамеру от дождя и морской воды. Если Вы намочите видеокамеру, то это может привести к неисправности аппарата, которая не всегда может быть устранена **[a]**.
- Никогда не оставляйте видеокамеру в месте с температурой выше 60°C (140°F), как, например, в автомобиле, оставленном на солнце или под прямым солнечным светом **[b]**.
- Не располагайте свою видеокамеру таким образом, чтобы видоискатель или экран ЖКД были направлены на солнце. Иначе может быть повреждено внутреннее устройство видоискателя или экрана ЖКД **[c]**.

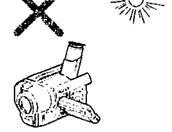
[a]



[b]



[c]



Step 1 Preparing the power supply

Installing the battery pack

Install the battery pack to use your camcorder outdoors.

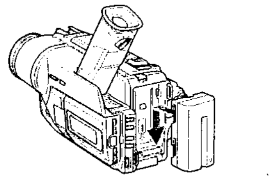
Slide the battery pack down until it clicks.

Пункт 1 Подготовка источника питания

Установка батарейного блока

Установите батарейный блок для того, чтобы использовать Вашу видеокамеру вне помещения.

Передвиньте батарейный блок вниз, так чтобы он защелкнулся на месте.

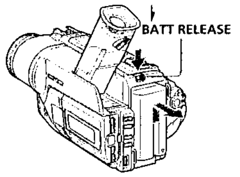


To remove the battery pack

Slide the battery pack out in the direction of the arrow while pressing ⬇ BATT RELEASE down.

Для снятия батарейного блока

Передвиньте батарейный блок в направлении стрелки, нажав кнопку ⬇ BATT RELEASE вниз.



After installing the battery pack
Do not carry your camcorder by holding the battery pack. If you do so, the battery pack may slide off your camcorder unintentionally, damaging your camcorder.

После установки батарейного блока
Не переносите свою видеокамеру, взявшись за батарейный блок. Если Вы так сделаете, батарейный блок может непроизвольно соскользнуть с Вашей видеокамеры и повредить ее.

Charging the battery pack

Use the battery pack after charging it for your camcorder.
Your camcorder operates only with the "InfoLITHIUM" battery pack (L series).

(1) Open the DC IN jack cover and connect the AC power adaptor supplied with your camcorder to the DC IN jack with the plug's ▲ mark facing up.
(2) Connect the mains lead to the AC power adaptor.
(3) Connect the mains lead to the mains.
(4) Set the POWER switch to OFF (CHARGE). Charging begins. The remaining battery time is indicated in minutes on the display window.

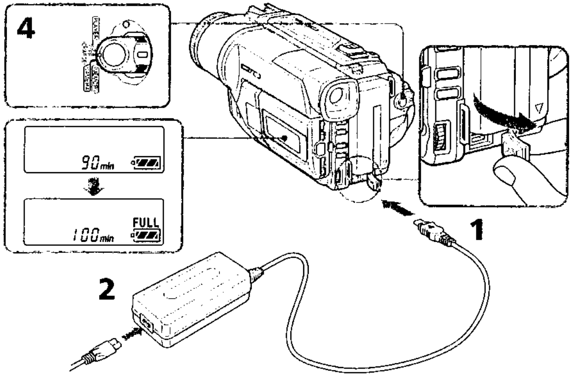
When the remaining battery indicator changes to ▬, **normal charge** is completed. To fully charge the battery **(full charge)**, leave the battery pack attached for about 1 hour after normal charge is completed until FULL appears in the display window. Fully charging the battery allows you to use the battery longer than usual.

Зарядка батарейного блока

Используйте батарейный блок для Вашей видеокамеры после его зарядки.
Ваша видеокамера работает только с батарейным блоком "InfoLITHIUM" (серии L).

(1) Откройте крышку гнезда DC IN и подсоедините сетевой адаптер переменного тока, прилагаемый к Вашей видеокамере, к гнезду DC IN, так чтобы штекер ▲ был направлен вверх.
(2) Подсоедините провод электропитания к сетевому адаптеру переменного тока.
(3) Подсоедините провод электропитания к сетевой розетке.
(4) Установите переключатель POWER в положение OFF (CHARGE). Начнется зарядка. В окошке дисплея будет отображаться время оставшегося заряда в минутах.

Если индикатор оставшегося заряда изменится на ▬, **это значит**, что нормальная зарядка завершена. Для полной зарядки батарейного блока **(полная зарядка)** оставьте батарейный блок прикрепленным на месте приблизительно на один час после завершения нормальной зарядки до тех пор, пока в окошко дисплея не появится индикация FULL. Полная зарядка батарейного блока позволяет Вам использовать батарейный блок дольше чем обычно.



After charging the battery pack

Disconnect the AC power adaptor from the DC IN jack on your camcorder.

Notes

- Prevent metallic objects from coming into contact with the metal parts of the DC plug of the AC power adaptor. This may cause a short-circuit, damaging the AC power adaptor.
- Keep the battery pack dry.
- When the battery pack is not to be used for a long time, charge the battery pack once fully, and then use it until it fully discharges again. Keep the battery pack in a cool place.

When the battery pack is charged fully
The LCD back light of the display window will be turned off.

Remaining battery time indicator
The remaining battery time indicator in the display window roughly indicates the recording time with the viewfinder.

Battery pack
The supplied battery pack is charged a little.

Until your camcorder calculates the actual remaining battery time
"– – – – min" appears in the display window.

While charging the battery pack, no indicator appears or the indicator flashes in the display window in the following cases
– The battery pack is not installed correctly.
– The AC power adaptor is disconnected.
– Something is wrong with the battery pack.

После зарядки батарейного блока

Отсоедините сетевой адаптер переменного тока от гнезда DC IN на Вашей видеокамере.

Примечания

- Не допускайте контакта металлических предметов с металлическими частями штекера постоянного тока сетевого адаптера. Это может привести к короткому замыканию и повреждению Вашего сетевого адаптера.
- Содержите батарейный блок в сухом состоянии.
- Если батарейный блок предполагается не использовать длительное время, зарядите его полностью один раз, а затем используйте до тех пор, пока он снова полностью не разрядится.
  Храните батарейный блок в прохладном месте.

Если батарейный блок заряжен полностью
Задняя подсветка ЖКД в окошке дисплея выключится.

Индикатор времени оставшегося заряда батарейного блока
Индикатор времени оставшегося заряда батарейного блока в окошке дисплея приблизительно указывает время записи с помощью видоискателя.

Батарейный блок
Батарейный блок уже немного заряжен на предприятии-изготовителе.

До тех пор, пока Ваша видеокамера определит действительное время оставшегося заряда батарейного блока
В окошке дисплея будет отображаться индикация "– – – – min".

Во время зарядки батарейного блока никакой индикатор не появляется, или индикатор будет мигать в окошке дисплея в следующих случаях
– Батарейный блок установлен не правильно.
– Отсоединен сетевой адаптер переменного тока.
– Что-то не в порядка с батарейным блоком.

Charging time/Время зарядки

Battery pack/ Батарейный блок	Full charge (Normal charge)/ Полная зарядка (нормальная зарядка)
NP-F330 [1]	150 (90)
NP-F530/F550 [2]	210 (150)
NP-F730/F750	300 (240)
NP-F930/F950	390 (330)
NP-F960	420 (360)

Approximate number of minutes to charge an empty battery pack

[1] Supplied with DCR-TRV120E/TRV320E
[2] Supplied with DCR-TRV125E

Приблизительное время в минутах для зарядки полностью разряженного батарейного блока

[1] Прилагается к DCR-TRV120E/TRV320E
[2] Прилагается к DCR-TRV125E

Recording time/Время записи

DCR-TRV120E/TRV125E

Battery pack/ Батарейный блок	Recording with the viewfinder/ Запись с помощью видоискателя		Recording with the LCD screen/ Запись с помощью экрана ЖКД	
	Continuous [3] Непрерывкая [3]	Typical [4] Типичная [4]	Continuous [3] Непрерывная [3]	Typical [4] Типичная [4]
NP-F330 [1]	100 (90)	55 (50)	90 (80)	50 (45)
NP-F530	165 (150)	95 (85)	145 (130)	80 (75)
NP-F550 [2]	200 (180)	115 (100)	175 (160)	100 (90)
NP-F730	335 (300)	190 (170)	300 (270)	170 (155)
NP-F750	410 (365)	235 (210)	365 (325)	210 (185)
NP-F930	535 (480)	305 (275)	475 (430)	270 (245)
NP-F950	630 (570)	360 (325)	555 (500)	315 (285)
NP-F960	740 (665)	420 (380)	660 (590)	375 (335)

DCR-TRV320E

Battery pack/ Батарейный блок	Recording with the viewfinder/ Запись с помощью видоискателя		Recording with the LCD screen/ Запись с помощью экрана ЖКД	
	Continuous [3] Непрерывкая [3]	Typical [4] Типичная [4]	Continuous [3] Непрерывная [3]	Typical [4] Типичная [4]
NP-F330 [1]	105 (95)	60 (55)	85 (75)	50 (40)
NP-F530	175 (160)	100 (90)	140 (125)	80 (70)
NP-F550 [2]	210 (190)	120 (110)	170 (155)	95 (90)
NP-F730	365 (325)	210 (185)	290 (260)	165 (150)
NP-F750	440 (395)	250 (225)	355 (315)	200 (180)
NP-F930	575 (520)	325 (300)	460 (415)	260 (235)
NP-F950	675 (610)	385 (345)	540 (485)	305 (275)
NP-F960	790 (710)	450 (405)	640 (580)	365 (330)

Approximate number of minutes when you use a fully charged battery

Numbers in parentheses "( )" indicate the time using a normally charged battery.

[1] Supplied with DCR-TRV120E/TRV320E
[2] Supplied with DCR-TRV125E
[3] Approximate continuous recording time at 25°C (77°F). The battery life will be shorter if you use your camcorder in a cold environment.
[4] Approximate number of minutes when recording while you repeat recording start/stop, zooming and turning the power on/off. The actual battery life may be shorter.

Приблизительное время в минутах при использовании полностью заряженного батарейного блока

Числа в скобках "( )" указывают время при использовании батарейного блока с нормальной зарядкой.

[1] Прилагается к DCR-TRV120E/TRV320E
[2] Прилагается к DCR-TRV125E
[3] Приблизительное время непрерывной записи при температуре 25°C (77°F). При использовании видеокамеры в холодных условиях срок службы батарейного блока будет короче.
[4] Приблизительное время в минутах при записи с неоднократным пуском/остановкой записи, наездом видеокамеры и включением/выключением питания. Фактический срок службы заряда батарейного блока может быть короче.

Playing time/Время воспроизведения

DCR-TRV120E/TRV125E

Battery pack/ Батарейный блок	Playing time on LCD screen/ Время воспроизведения на экране ЖКД	Playing time with LCD closed/ Время воспроизведения при закрытом ЖКД
NP-F330 [1]	85 (75)	95 (85)
NP-F530	140 (125)	160 (145)
NP-F550 [2]	170 (155)	195 (175)
NP-F730	290 (260)	325 (290)
NP-F750	355 (315)	395 (355)
NP-F930	460 (415)	515 (465)
NP-F950	540 (485)	610 (550)
NP-F960	640 (580)	720 (645)

DCR-TRV320E

Battery pack/ Батарейный блок	Playing time on LCD screen/ Время воспроизведения на экране ЖКД	Playing time with LCD closed/ Время воспроизведения при закрытом ЖКД
NP-F330 [1]	85 (75)	100 (90)
NP-F530	135 (120)	170 (155)
NP-F550 [2]	165 (150)	205 (185)
NP-F730	285 (255)	350 (310)
NP-F750	345 (305)	425 (380)
NP-F930	450 (405)	555 (500)
NP-F950	525 (470)	650 (590)
NP-F960	625 (560)	765 (685)

Approximate number of minutes when you use a fully charged battery

Numbers in parentheses "( )" indicate the time using a normally charged battery. The battery life will be shorter if you use your camcorder in a cold environment.

[1] Supplied with DCR-TRV120E/TRV320E
[2] Supplied with DCR-TRV125E

Приблизительное время в минутах при использовании полностью заряженного батарейного блока

Цифры в скобках "( )" указывают время при использовании батарейного блока с нормальной зарядкой. При использовании видеокамеры в холодных условиях срок службы батарейного блока будет короче.

[1] Прилагается к DCR-TRV120E/TRV320E
[2] Прилагается к DCR-TRV125E

The remaining battery time indicator
The indicator may not be correct, depending on the conditions in which you are recording. When you close the LCD panel and open it again, it takes about 1 minute for the correct remaining battery time to be displayed.

The power may go off although the battery remaining indicator indicates that the battery pack has enough power to operate.
Charge the battery pack fully again so that the indication on the battery remaining indicator is correct.

What is "InfoLITHIUM"?
The "InfoLITHIUM" is a lithium ion battery pack which can exchange data such as battery consumption with compatible electronic equipment. This unit is compatible with the "InfoLITHIUM" battery pack (L series). Your camcorder operates only with the "InfoLITHIUM" battery. "InfoLITHIUM" battery packs have the ⓘ InfoLITHIUM mark.
"InfoLITHIUM" is a trademark of Sony Corporation.

По индикатору времени оставшегося заряда батарейного блока во время записи
Индикатор может быть неправильным в зависимости от условий, в которых выполняется запись. Если Вы закроете панель ЖКД и откроете ее снова, то пройдет около 1 минуты, прежде чем на дисплее появится правильное время оставшегося заряда батарейного блока.

Заряд может быть израсходован, хотя индикатор времени оставшегося заряда батарейного блока будет показывать, что заряд батарейного блока вполне достаточный для его эксплуатации.
Зарядите батарейный блок еще раз, так чтобы показание на индикаторе оставшегося заряда батарейного блока было правильным.

Что такое "InfoLITHIUM"?
"InfoLITHIUM" представляет собой литиево-ионный батарейный блок, который может обмениваться данными, такими как потребление заряда батарейного блока, с совместимой электронной аппаратурой. Это устройство совместимо с батарейным блоком "InfoLITHIUM" (серии L). Ваша видеокамера работает только с батарейным блоком "InfoLITHIUM". На батарейных блоках "InfoLITHIUM" серии L имеется знак ⓘ InfoLITHIUM.
"InfoLITHIUM" является торговой маркой корпорации Sony Corporation.

Step 1 Preparing the power supply

Connecting to the mains

When you use your camcorder for a long time, we recommend that you power it from the mains using the AC power adaptor.

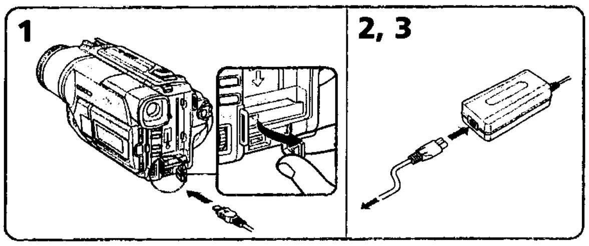
(1) Open the DC IN jack cover, and connect the AC power adaptor to the DC IN jack on your camcorder with the plug's ▲ mark facing up.
(2) Connect the mains lead to the AC power adaptor.
(3) Connect the mains lead to the mains .

Пункт 1 Подготовка источника питания

Подсоединение к сетевой розетке

Если Вы собираетесь использовать видеокамеру длительное время, рекомендуется использовать питание от электрической сети с помощью сетевого адаптера переменного тока.

(1) Откройте крышку гнезда DC IN и подсоедините сетевой адаптер переменного тока к гнезду DC IN на Вашей видеокамеру, так чтобы знак ▲ на штекере был обращен вверх.
(2) Подсоедините провод электропитания к сетевому адаптеру переменного тока.
(3) Подсоедините провод электропитания к сетевой розетке.



PRECAUTION
The set is not disconnected from the AC power source (the mains) as long as it is connected to the mains, even if the set itself has been turned off.

Notes
- The AC power adaptor can supply power even if the battery pack is attached to your camcorder.
- The DC IN jack has "source priority". This means that the battery pack cannot supply any power if the mains lead is connected to the DC IN jack, even when the mains lead is not plugged into the mains.

Using a car battery
Use Sony DC Adaptor/Charger (not supplied).

ПРЕДОСТЕРЕЖЕНИЕ
Аппарата не отключается от источника переменного тока (электриеской сети) до тех пор, пока он подсоединен к электрической сети, даже если сам аппарат и выключен.

Примечания
- Питание от сетевого адаптера переменного тока может подаваться даже в случае, если батарейный блок прикреплен к Вашей видеокамере.
- Гнездо DC IN имеет "приоритет источника". Это значит, что питание от батарейного блока не может подаваться, если провод электропитания подсоединен к гнезду DC IN, даже если провод электропитания и не подсоединен к сетевой розетке.

Использование автомобильного аккумулятора
Используйте адаптер/зарядное устройство постоянного тока фирмы Sony (не прилагается).

Step 2 Inserting a cassette

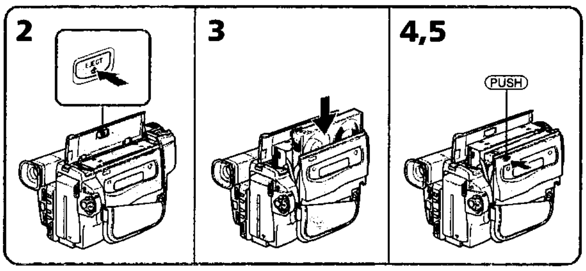
We recommend using Hi8 **Hi8**/Digital8 ▮▶ video cassettes.

(1) Prepare the power supply. (p. 12)
(2) Open the lid of the cassette compartment, and press EJECT. The cassette compartment opens automatically.
(3) Insert a cassette with its window facing out and the tab on the cassette up.
(4) Close the cassette compartment by pressing the (PUSH) mark on the cassette compartment. The cassette compartment automatically goes down.
(5) Close the lid of the cassette compartment.

Пункт 2 Установка кассеты

Рекомендуется использовать видеокассеты типа Hi8 **Hi8**/Digital8 ▮▶.

(1) Приготовьте источник питания (стр. 12).
(2) Откройте крышку кассетного отсека и нажмите кнопку EJECT. Кассетный отсек автоматически откроется.
(3) Вставьте кассету, так чтобы окошку было обращено наружу, а лепесток на кассете вверх.
(4) Закройте кассетный отсек, нажав метку (PUSH) на отсеке. Кассетный отсек автоматически закроется.
(5) Закройте крышку кассетного отсека.



To eject a cassette
Follow the procedure above, and eject the cassette in step **3**.

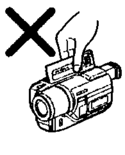
Для извлечения кассеты
Выполните приведенную выше процедуру и вытолкните кассету в пункте **3**.

Step 2 Inserting a cassette

Notes
- Do not press the cassette compartment down. Doing so may cause malfunction.
- Your camcorder records pictures in the Digital8 ▮▶ system.
- The recording time when you use your camcorder is half of indicated time on Hi8 **Hi8** tape. If you select the LP mode in the menu settings, 3/4 of indicated time on Hi8 **Hi8** tape.
- If you use standard 8 **8** tape, be sure to play back the tape on this camcorder. Mosaic-pattern noise may appear when you play back standard 8 **8** tape on other camcorders (including other DCR-TRV120E/TRV125E/TRV320E).
- The cassette compartment may not be closed when you press any part of the lid other than the (PUSH) mark.
- Do not pick up your camcorder by holding the lid of the cassette compartment.

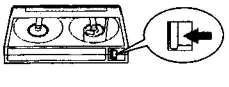
Пункт 2 Установка кассеты

Примечания
- Не нажимайте вниз кассетный отсек. Это может привести к неисправности.
- Ваша видеокамера выполняет запись изображений в системе Digital8 ▮▶.
- Время записи при использовании Вашей цифровой видеокамеры в два раза меньше времени, указанного на ленте Hi8 **Hi8**. Если Вы выберите режим LP в установках, то время записи буде равно 3/4 меньше времени, указанного на ленте Hi8 **Hi8**.
- Если Вы используете стандартную ленту 8 **8**, то ее рекомендуется воспроизводить на этой же видеокамере. Записанные с помощью Вашей видеокамеры, на Вашей же видеокамере. В случае воспроизведения стандартных лент типа 8 **8** на других видеокамерах, могут появиться помехи мозаичного типа (включая другие видеокамеры DCR-TRV120E/TRV125E/TRV320E).
- Кассетный отсек может не закрыться, если Вы нажмете на какое-либо другое место на крышке, а не на метку (PUSH).
- Не поднимайте видеокамеру за крышку кассетного отсека.



To prevent accidental erasure
Slide the write-protect tab on the cassette to expose the red mark.

Для предотвращения случайного стирания
Передвиньте лепесток защиты записи на кассете, так чтобы появилась красная метка.



— Recording – Basics —

Recording a picture

Your camcorder automatically focuses for you.

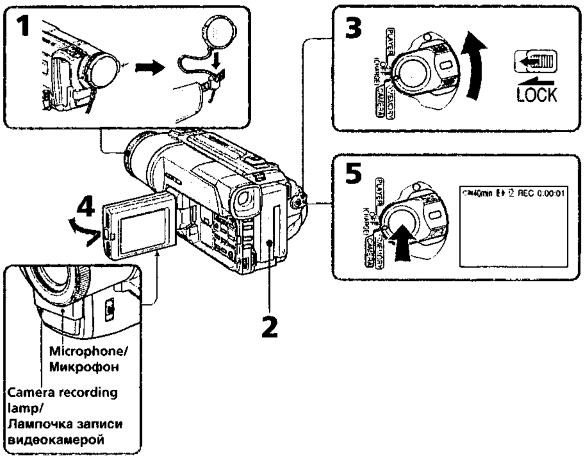
(1) Remove the lens cap by pressing both knobs on its sides and attach the lens cap to the grip strap.
(2) Install the power source and insert a cassette. See "Step 1" and "Step 2" for more information (p. 12 to 20).
(3) Set the POWER switch to CAMERA while pressing the small green button. Your camcorder is set to the standby mode.
(4) Open the LCD panel while pressing OPEN. The viewfinder automatically turns off.
(5) Press START/STOP. Your camcorder starts recording. The "REC" indicator appears. The camera recording lamp located on the front of your camcorder lights up. To stop recording, press START/STOP again.
The recording lamp lights up in the viewfinder when you record with the viewfinder.

— Запись – Основные положения —

Запись изображения

Ваша видеокамера автоматически выполняет фокусировку за Вас.

(1) Снимите крышку объектива, нажав обе кнопки на ее кромке, и прикрепите крышку объектива к ремню для захвата.
(2) Установите источник питания и вставьте кассету. Подробные сведения приведены в "Пункте 1" и "Пункте 2" (стр. 12 – 20).
(3) Нажав маленькую зеленую кнопку, установите переключатель POWER в положение CAMERA. Ваша видеокамера переключится в режим ожидания.
(4) Нажав кнопку OPEN, откройте панель ЖКД. Видоискатель выключится автоматически.
(5) Нажмите кнопку START/STOP. Ваша видеокамера начнет запись. Появится индикатор "REC". Высветится также лампочка записи, расположенная на передней панели видеокамеры. Для остановки записи нажмите кнопку START/STOP еще раз.
При записи с помощью видоискателя, внутри него высветится лампочка записи.



Notes
- Fasten the grip strap firmly.
- Do not touch the built-in microphone during recording.

Note on Recording mode
Your camcorder records and plays back in the SP (standard play) mode and in the LP (long play) mode. Select SP or LP in the menu settings (p. 76). In the LP mode, you can record 1.5 times as long as in the SP mode. When you record a tape in the LP mode on your camcorder, we recommend that you play back the tape on your camcorder.

Note on LOCK (DCR-TRV320E only)
When you slide LOCK to the left, the POWER switch can no longer be set to MEMORY accidentally. The LOCK is released as a default setting.

To enable smooth transition
You can make the transition between the last scene you recorded and the next scene smooth as long as you do not eject the cassette if you turn off your camcorder. When you change the battery pack, set the POWER switch to OFF (CHARGE).

If you leave your camcorder in the standby mode for 3 minutes
Your camcorder automatically turns off. This is to save battery power and to prevent battery and tape wear. To resume the standby mode, set the POWER switch to OFF (CHARGE) once, then turn it to CAMERA again.

Примечания
- Плотно пристегните ремень для захвата видеокамеры.
- Не прикасайтесь к встроенному микрофону во время записи.

Примечание по режиму записи
Ваша видеокамера выполняет запись и воспроизведение в режиме SP (стандартное воспроизведение) и в режиме LP (долгоиграющее воспроизведение). Выберите команду SP или LP в установках меню (стр. 76). В режиме LP Вы можете выполнять запись в 1,5 раза дольше по времени, чем в режиме SP. При выполнении на Вашей видеокамере записи на ленту в режиме LP рекомендуется воспроизводить эту ленту также на Вашей видеокамере.

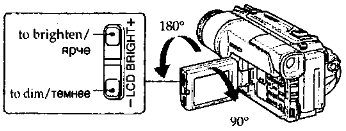
Примечание по режиму LOCK (только DCR-TRV320E)
Если Вы передвинете переключатель LOCK влево, переключатель POWER уже не может быть случайно установлен в положение MEMORY. Режим LOCK будет устанавливаться по умолчанию.

Для обеспечения плавного перехода
Вы можете выполнять плавный переход между последним записанным эпизодом и следующим эпизодом до тех пор, пока не извлечете кассету при выключенном питании. При замене батарейного блока установите переключатель POWER в положение OFF (CHARGE).

Если Вы оставите Вашу видеокамеру в режиме ожидания на 3 минуты
Видеокамера выключится автоматически. Это предотвращает расход заряда батарейного блока и износ ленты. Для возобновления режима ожидания установите переключатель POWER в положение блока установите сначала переключатель POWER в положение OFF (CHARGE), а затем снова поверните его в положение CAMERA.

Adjusting the LCD screen

To adjust the brightness of the LCD screen, press either of the two buttons on LCD BRIGHT.
The LCD panel moves about 90 degrees to the viewfinder side and about 180 degrees to the lens side.
If you turn the LCD panel over so that it faces the other way, the ☺ indicator appears on the LCD screen and in the viewfinder (**Mirror mode**).



When closing the LCD panel, set it vertically until it clicks, and swing it into the camcorder body.

Note
When using the LCD screen except in the mirror mode, the viewfinder automatically turns off.

When you use the LCD screen outdoors in direct sunlight
The LCD screen may be difficult to see. If this happens, we recommend that you use the viewfinder.

Picture in the mirror mode
The picture on the LCD is a mirror-image. However, the picture will be normal when recorded.

During recording in the mirror mode
You cannot operate the ZERO SET MEMORY on the Remote Commander.

Indicators in the mirror mode
The STBY indicator appears as ❚❚● and REC as ●. Some of other indicators appear mirror-reversed and others are not displayed.

Регулировка экрана ЖКД

Для регулировки яркости экрана ЖКД нажмите одну из кнопок на LCD BRIGHT.
Панель ЖКД может передвигаться примерно на 90 градусов в сторону видоискателя и примерно на 180 градусов в сторону объектива.
Если Вы повернете панель ЖКД так, что она будет направлена в другую сторону, на экране ЖКД появится индикатор ☺ (**Зеркальный режим**).

При закрывании панели ЖКД установите ее вертикально, пока не раздастся щелчок, а затем присоедините ее к корпусу видеокамеры.

Примечание
При использовании экрана ЖКД видоискатель автоматически выключается, кроме зеркального режима.

Если Вы используете экран ЖКД вне помещения под прямым солнечным светом
Возможно будет трудно разглядеть экран ЖКД. В этом случае рекомендуется использовать видоискатель.

Изображение в зеркальном режиме
Изображение на экране ЖКД будет отображаться зеркально. Однако запись изображения будет нормальной.

Во время записи в зеркальном режиме
Вы не можете оперировать кнопкой ZERO SET MEMORY на пульте дистанционного.

Индикаторы в зеркальном режиме
Индикатор STBY появится в виде ❚❚●, а индикатор REC в виде ●. Некоторые другие индикаторы появятся в зеркально отображенном виде, а некоторые из них не будут отображаться совсем.

After recording

(1) Set the POWER switch to OFF (CHARGE).
(2) Close the LCD panel.
(3) Eject the cassette.

Using the zoom feature

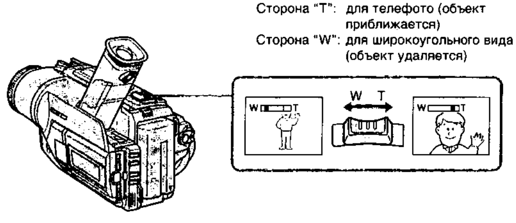
Move the power zoom lever a little for a slower zoom. Move it further for a faster zoom.
Using the zoom function sparingly results in better-looking recordings.
"T" side: for telephoto (subject appears closer)
"W" side: for wide-angle (subject appears farther away)

После записи

(1) Установите переключатель POWER в положение OFF (CHARGE).
(2) Закройте панель ЖКД.
(3) Извлеките кассету.

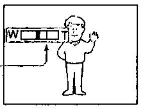
Использование функции наезда видеокамеры

Передвиньте рычаг приводного вариообъектива слегка для относительно медленного наезда видеокамеры.
Передвиньте его сильнее для ускоренного наезда видеокамеры.
Использование функции наезда видеокамеры в небольшом количестве обеспечивает наилучшие результаты.
Сторона "T": для телефото (объект приближается)
Сторона "W": для широкоугольного вида (объект удаляется)



Zoom greater than 25× is performed digitally. To activate digital zoom, select the digital zoom power in D ZOOM in the menu settings. (p. 76) The picture quality deteriorates as the picture is processed digitally.

Наезд видеокамеры более 25× выполняется цифровым методом. Для приведения в действие цифрового вариообъектива выберите приводной цифровой вариообъектив D ZOOM в установках меню (стр. 76). Поскольку обработка изображения выполняется цифровым способом, качество изображения несколько ухудшится.



The right side of the bar shows the digital zooming zone.
The digital zooming zone appears when you select the digital zoom power in D ZOOM in the menu settings./
Правая сторона полосы на экране показывает зону цифровой трансфокации.
Если Вы выберите приводной цифровой вариообъектив D ZOOM в установках меню, появится зона цифровой трансфокации.

Notes on digital zoom
- Digital zoom starts to function when zoom exceeds 25×.
- The picture quality deteriorates as you go toward the "T" side.

When you shoot close to a subject
If you cannot get a sharp focus, move the power zoom lever to the "W" side until the focus is sharp. You can shoot a subject that is at least about 80 cm (about 2 feet 5/8 inch) away from the lens surface in the telephoto position, or about 1 cm (about 1/2 inch) away in the wide-angle position.

To record pictures with the viewfinder – adjusting the viewfinder

If you record pictures with the LCD panel closed, check the picture with the viewfinder. Adjust the viewfinder lens to your eyesight so that the indicators in the viewfinder come into sharp focus.

Lift up the viewfinder and move the viewfinder lens adjustment lever.

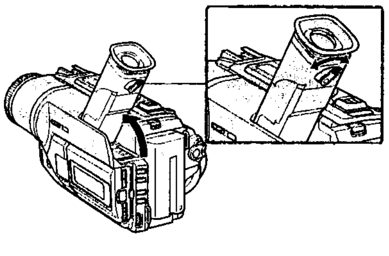
Примечания к наезду видеокамеры цифровым методом
- Цифровой вариообъектив начинает срабатывать в случае, если наезд видеокамеры превышает 25×.
- Качество изображения ухудшается по мере приближения к стороне "T".

При съемке объекта с близкого положения
Если Вы не можете получить четкой фокусировки, передвиньте рычаг приводного вариообъектива сторону "W" до получения четкой фокусировки. Вы можете выполнять съемку объекта в положении телефото, который отстоит по крайней мере на расстоянии 80 см от поверхности объектива или же около 1 см в положении широкоугольного вида.

Для записи изображений с помощью видоискателя – регулировка видоискателя

Если Вы будете записывать изображения при закрытой панели ЖКД, проверьте изображение с помощью видоискателя. Отрегулируйте объектив видоискателя в соответствии со своим зрением, так чтобы индикаторы в видоискателе были четко сфокусированы.

Поднимите видоискатель и подвигайте рычаг регулировки объектива видоискателя.

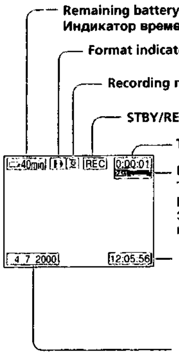


Indicators displayed in the recording mode

The indicators are not recorded on tape.

Индикаторы, отображаемые в режиме записи

Индикаторы не записываются на ленту.



Remaining battery time indicator/ Индикатор времени оставшегося заряда батарейного блока

Format indicator/Индикатор формата

Recording mode indicator/Индикатор режима записи

STBY/REC indicator/Индикатор STBY/REC

Time code/Tape counter/Код времени/Счетчик ленты

Remaining tape indicator
This appears after you start to record for a while./
Индикатор оставшейся ленты
Этот индикатор появляется на некоторое время после начала записи.

Time indicator/Индикатор времени
This is displayed for five seconds after the POWER switch is set to CAMERA or MEMORY. (DCR-TRV320E only)/
Он отображается около пяти секунд после того, как переключатель POWER установлен в положение CAMERA или MEMORY. (Только DCR-TRV320E)

Date indicator/Индикатор даты
This is displayed for five seconds after the POWER switch is set to CAMERA or MEMORY. (DCR-TRV320E only)/
Он отображается около пяти секунд после того, как переключатель POWER установлен в положение CAMERA или MEMORY. (Только DCR-TRV320E)

Time code (for tapes recorded in the Digital8 ⏵ system only)
The time code indicates the recording or playback time, "0:00:00" (hours:minutes: seconds) in CAMERA mode and "0:00:00:00" (hours:minutes:seconds:frames) in PLAYER mode. You cannot rewrite only the time code. When you play back tapes recorded in the Hi8/ standard 8 system, the tape counter appears. You cannot reset the time code or the tape counter.

Код времени (только для лент, записанных в цифровой системе Digital8 ⏵)
Код времени указывает время записи или воспроизведения, "0:00:00" (часы: минуты: секунды) в режиме CAMERA и "0:00:00:00" (часы: минуты: секунды: кадры) в режиме PLAYER. Вы не можете перезаписать только код времени. При воспроизведении лент, записанных в системе Hi8/стандартной системе 8.
Вы не можете переустановить код времени.

Shooting backlit subjects – BACK LIGHT

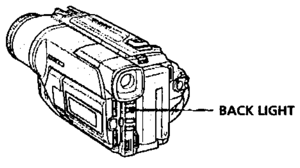
When you shoot a subject with the light source behind the subject or a subject with a light background, use the backlight function.

Press BACK LIGHT in CAMERA or MEMORY (DCR-TRV320E only) mode.
The ☒ indicator appears on the LCD screen or in the viewfinder.
To cancel, press BACK LIGHT again.

Съемка объектов с задней подсветкой– BACKLIGHT

Если Вы выполняете съемку объекта с источником света позади него или же объекта со светлым фоном, используйте функцию задней подсветки.

Нажмите кнопку BACK LIGHT в режиме CAMERA или MEMORY (только DCR-TRV320E) ожидания.
В видоискателе или на экране ЖКД появится индикатор ☒.
Для отмены нажмите кнопку BACK LIGHT еще раз.



If you press EXPOSURE when shooting backlit subjects
The backlight function will be canceled.

Если вы нажмете кнопку EXPOSURE при выполнении съемки объектов с задней подсветкой
Функция задней подсветки будет отменена.

Shooting in the dark – NightShot/Super NightShot

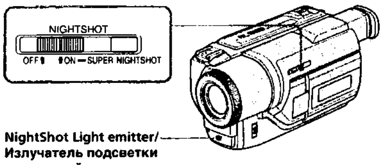
The NightShot function enables you to shoot a subject in a dark place. For example, you can satisfactorily record the environment of nocturnal animals for observation when you use this function.

While your camcorder is in CAMERA or MEMORY (DCR-TRV320E only) mode, slide NIGHTSHOT to ON.
☉ and "NIGHTSHOT" indicators flash on the LCD screen or in the viewfinder.
To cancel the NightShot function, slide NIGHTSHOT to OFF.

Съемка в темноте – Ночная съемка/ Ночная суперсъемка

Функция ночной съемки позволяет Вам выполнять съемку объектов в темных местах. Например, Вы сможете с успехом выполнять съемку ночных животных для наблюдения при использовании данной функции.

В то время, когда видеокамера находится в режиме CAMERA или MEMORY (только DCR-TRV320E), передвиньте переключатель NIGHTSHOT в положение ON.
Индикаторы ☉ и "NIGHTSHOT" начнут мигать на экране ЖКД или в видоискателе.
Для отмены функции ночной съемки передвиньте переключатель NIGHTSHOT в положении OFF.



Using SUPER NIGHTSHOT

The Super NightShot mode makes subjects up to 16 times brighter than those recorded in the NightShot mode.

(1) Slide NIGHTSHOT to ON in CAMERA mode. ☉ indicator appears on the LCD screen or in the viewfinder.
(2) Press SUPER NIGHTSHOT. S☉ and "SUPER NIGHTSHOT" indicators flash on the LCD screen or in the viewfinder.
To cancel the Super NightShot mode, press SUPER NIGHTSHOT again.

Using the NightShot Light

The picture will be clearer with the NightShot Light on. To enable NightShot Light, set N.S.LIGHT to ON in the menu settings (p. 76).

Использование режима SUPER NIGHTSHOT

Режим ночной суперсъемки позволяет сделать объекты более чем в 16 раз ярче, чем в случае, если Вы будете выполнять съемку в темноте в режиме ночной съемки.

(1) Передвиньте переключатель NIGHTSHOT в положение ON в режиме CAMERA. На экране ЖКД или в видоискателе появится индикатор ☉.
(2) Нажмите кнопку SUPER NIGHTSHOT. На экране ЖКД или в видоискателе начнут мигать индикаторы S☉ и "SUPER NIGHTSHOT".
Для отмены режима ночной суперсъемки нажмите кнопку SUPER NIGHTSHOT еще раз.

Использование подсветки для ночной съемки

Изображение станет ярче, если включить функцию ночной подсветки. Для включения функции ночной подсветки установите переключатель N.S.LIGHT в положение ON в установках меню (стр. 76).

Notes
- Do not use the NightShot function in bright places (ex. outdoors in the daytime). This may cause your camcorder to malfunction.
- When you keep NIGHTSHOT set to ON in normal recording, the picture may be recorded in incorrect or unnatural colours.
- If focusing is difficult with the autofocus mode when using the NightShot function, focus manually.

While using the NightShot function, you can not use the following functions:
– Exposure
– PROGRAM AE

While using the Super NightShot mode, you can not use the following functions:
– Fader
– Digital effect
– Exposure
– PROGRAM AE

Shutter speed in the Super NightShot mode
The shutter speed will be automatically changed depending on the brightness of the background. The motion of the picture will be slow.

NightShot Light
NightShot Light rays are infrared and so are invisible. The maximum shooting distance using the NightShot Light is about 3 m (10 feet).

Примечания
- Не используйте функцию ночной съемки в ярких местах (например, на улице в дневное время). Это может привести к неисправности Вашей видеокамеры.
- При удержании установки NIGHTSHOT в положении ON при нормальной записи изображение может быть записано в неправильных или неестественных цветах.
- Если фокусировка затруднена в автоматическом режиме при использовании функции ночной съемки, выполните фокусировку вручную.

При использовании функции ночной съемки Вы не можете использовать следующие функции:
– Экспозиция
– PROGRAM AE

При использовании функции ночной суперсъемки Вы не можете использовать следующие функции:
– Фейдер
– Цифровой эффект
– Экспозиция
– PROGRAM AE

Скорость затвора в режиме ночной суперсъемки
Скорость затвора будет автоматически изменяться в зависимости от яркости фона. Воспроизведение изображения будет замедленным.

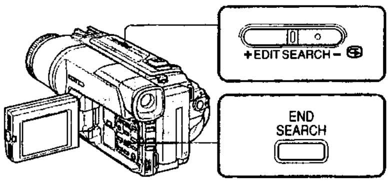
Подсветка для ночной съемки
Лучи подсветки для ночной съемки являются инфракрасными и поэтому невидимыми. Максимальное расстояние для съемки при использовании подсветки для ночной съемки равно примерно 3 м.

Checking the recording
– END SEARCH/EDITSEARCH/Rec Review

You can use these buttons to check the recorded picture or shoot so that the transition between the last recorded scene and the next scene you record is smooth.

Проверка записи
– END SEARCH/EDITSEARCH/ Просмотр записи

Вы можете использовать эти кнопки для проверки записанного изображения или съемки, так чтобы переход между последним записанным эпизодом и следующим записываемым эпизодом был плавным.



END SEARCH

You can go to the end of the recorded section after you record.

Press END SEARCH in the standby mode.
The last 5 seconds of the recorded section are played back and returns to the standby mode. You can monitor the sound from the speaker or headphones.

END SEARCH

Вы можете дойти до конца записанной части ленты после выполнения записи.

Нажмите кнопку END SEARCH в режиме ожидания. Будут воспроизведены последние 5 секунд, после чего видеокамера вернется в режим ожидания. Вы можете контролировать звук через динамик или головные телефоны.

EDITSEARCH

You can search for the next recording start point.

Hold down the +/– (⊖) side of EDITSEARCH in the standby mode. The recorded section is played back.
 +: to go forward
 –: to go backward
Release EDITSEARCH to stop playback. If you press START/STOP, re-recording begins from the point you released EDITSEARCH. You cannot monitor the sound.

EDITSEARCH

Вы можете выполнять поиск места начала следующей записи.

Держите нажатой сторону +/– (⊖) кнопки EDITSEARCH в режиме ожидания. Будет воспроизведена записанная часть.
 +: для продвижения вперед
 –: для продвижения назад
Отпустите кнопку EDITSEARCH для остановки воспроизведения. Если Вы нажмете кнопку START/STOP, начнется перезапись с того места, где Вы отпустили кнопку EDITSEARCH. Вы не можете контролировать звук.

Checking the recording
– END SEARCH/EDITSEARCH/Rec Review

Rec Review

You can check the section which you have stopped most recently.

Press the – (⊖) side of EDITSEARCH momentarily in the standby mode.
The section you have stopped most recently will be played back for a few seconds, and then your camcorder will return to the standby mode. You can monitor the sound from the speaker or headphones.

Notes
- END SEARCH, EDITSEARCH and Rec Review work only for tapes recorded in the Digital8 system.
- If you start recording after using the end search function, occasionally, the transition between the last scene you recorded and the next scene may not be smooth.
- Once you eject the cassette after you have recorded on the tape, the end search function does not work.

When there is a blank portion between pictures on a tape
The end search function may not work.

Проверка записи
– END SEARCH/EDITSEARCH/ Просмотр записи

Просмотр записи

Вы можете проверить последнюю записанную часть.

Нажмите кратковременно сторону – (⊖) кнопки EDITSEARCH в режиме ожидания. Будут воспроизведены последние несколько секунд записанной части. Вы можете контролировать звук через акустическую систему или головные телефоны.

Примечания
- Функции END SEARCH, EDITSEARCH и просмотра записи работают только для лент, записанных в цифровой системе Digital8.
- Если Вы случайно начали запись после использования функции поиска конца записи, то переход между последним записанным эпизодом и следующим записываемым эпизодом может не быть плавным.
- Если Вы вытолкните кассету после того, как будет выполнена запись на ленте, функция поиска конца записи не будет работать.

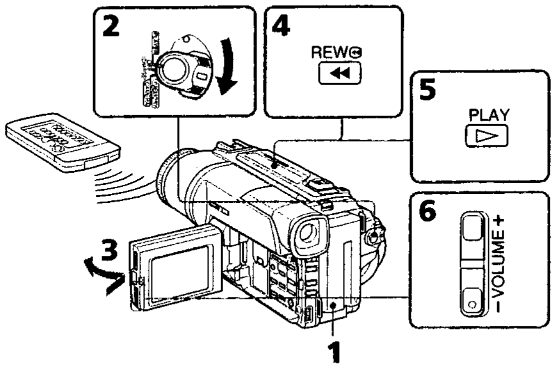
Если на ленте между изображениями имеется незаписанный участок
Функция поиска может не работать.

Playing back a tape

You can monitor the playback picture on the LCD screen. If you close the LCD panel, you can monitor the playback picture in the viewfinder. You can control playback using the Remote Commander supplied with your camcorder.
(1) Install the power source and insert the recorded tape.
(2) Set the POWER switch to PLAYER while pressing the small green button. The video control buttons light up.
(3) Open the LCD panel while pressing OPEN.
(4) Press ◀◀ to rewind the tape.
(5) Press ▶ to start playback.
(6) To adjust the volume, press either of the two buttons on VOLUME. The speaker on your camcorder is silent when the LCD panel is closed.

Воспроизведение ленты

Вы можете контролировать воспроизводимое изображение на экране ЖКД. Если Вы закроете панель ЖКД, Вы можете контролировать воспроизводимое изображение в видоискателе. Вы можете контролировать воспроизведение с помощью пульта дистанционного управления, прилагаемого к Вашей видеокамере.
(1) Установите источник питания и вставьте записанную ленту.
(2) Нажав маленькую зеленую кнопку, установите переключатель POWER в положение PLAYER. Появится индикация кнопок управления.
(3) Нажав кнопку OPEN, откройте панель ЖКД.
(4) Нажмите кнопку ◀◀ для ускоренной перемотки ленты назад.
(5) Нажмите кнопку ▶ для включения воспроизведения.
(6) Для регулировки громкости нажимайте одну из двух кнопок VOLUME. Если панель ЖКД на Вашей видеокамере закрыта, динамик не будет работать.



To stop playback
Press ■.

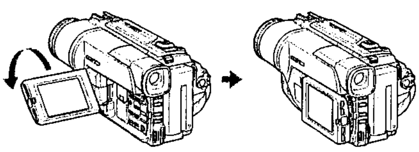
Для остановки воспроизведения
Нажмите кнопку ■.

Playing back a tape

When monitoring on the LCD screen
You can turn the LCD panel over and move it back to the camcorder body with the LCD screen facing out.

Воспроизведение ленты

Во время контроля на экране ЖКД
Вы можете повернуть панель управления и придвинуть ее обратно на место к корпусу видеокамеры, так что экран ЖКД будет обращен наружу.

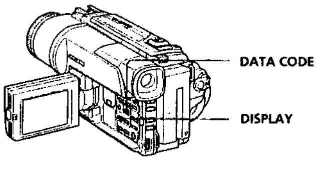


To display the screen indicators – Display function

Press DISPLAY on your camcorder or the Remote Commander supplied with your camcorder.
The indicators appear on the LCD screen.
To make the indicators disappear, press DISPLAY again.

Для отображения экранных индикаторов – Функция индикации

Нажмите кнопку DISPLAY на Вашей видеокамере или на пульте дистанционного управления, который прилагается к Вашей видеокамере.
На экране ЖКД появятся индикаторы.
Для того, чтобы индикаторы исчезли, нажмите еще раз кнопку DISPLAY.

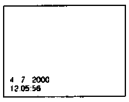


Using the data code function

Your camcorder automatically records not only images on the tape but also the recording data (date/time or various settings when recorded) **(Data code).**

Press DATA CODE on your camcorder or the Remote Commander in the playback mode.

The display changes as follows:
date/time → various settings (SteadyShot, exposure AUTO/MANUAL, white balance, gain, shutter speed, aperture value) → no indicator



Not to display recording date
Set DATA CODE to DATE in the menu settings (p. 76)
The display changes as follows:
date/time → no indicator

Note on the data code function
The data code function works only for tapes recorded in the Digital8 system.

Recording data
Recording data is your camcorder's information when you have recorded. In the recording mode, the recording data will not be displayed.

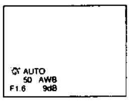
When you use data code function, bars (-- -- ---- and --:--:--) appear if:
- A blank section of the tape is being played back.
- The tape is unreadable due to tape damage or noise.
- The tape was recorded by a camcorder without the date and time set.

Использование функции кода даты

Ваша видеокамера автоматически записывает не только изображения на ленту, но также и данные записи (дату/время или разные установки при записи).
(Код даты).

Нажмите кнопку DATE CODE на Вашей видеокамере или пульте дистанционного управления в режиме воспроизведения.

Индикация будет изменяться следующим образом:
дата/время → разные установки (устойчивая съемка, экспозиция AUTO/MANUAL, баланс белого, усиление, скорость затвора, величина диафрагмы) → без индикации



Для того, чтобы не отображались данные записи
Установите команду DATE CODE в положение DATE в установках меню (стр. 76).
Индикация будет изменяться следующим образом:
дата/время → без индикации

Примечание по функции кода данных
Функция кода данных работает только для лент, записанных в цифровой системе Digital8.

Записанные данные
Записанные данные несут информацию о записи, выполненной Вашей видеокамерой. В режиме записи данные отображаться не будут.

Если Вы используете функцию кода данных, то появятся полосы (-- -- ---- и --:--:--), если:
- Воспроизводится незаписанный участок на ленте.
- Лента является не читаемой из-за повреждения или помех.
- Запись на ленту была выполнена видеокамерой без установки даты и времени.

Various playback modes

To operate video control buttons, set the POWER switch to PLAYER.

To view a still picture (playback pause)

Press ❚❚ during playback. To resume playback, press ❚❚ or ▶.

To advance the tape

Press ▶▶ in the stop mode. To resume normal playback, press ▶.

To rewind the tape

Press ◀◀ in the stop mode. To resume normal playback, press ▶.

To change the playback direction

Press < on the Remote Commander during playback to reverse the playback direction. To resume normal playback, press ▶.

To locate a scene monitoring the picture (picture search)

Keep pressing ◀◀ or ▶▶ during playback. To resume normal playback, release the button.

To monitor the high-speed picture while advancing or rewinding the tape (skip scan)

Keep pressing ◀◀ while rewinding or ▶▶ while advancing the tape. To resume rewinding or advancing, release the button.

To view the picture at slow speed (slow playback)

Press ❚▶ on the Remote Commander during playback. For slow playback in the reverse direction, press <, then press ❚▶ on the Remote Commander. To resume normal playback, press ▶.

Переменные режимы воспроизведения

Для выполнения управления кнопками установите переключатель POWER в положение PLAYER.

Для просмотра неподвижного изображения (пауза воспроизведения)

Нажмите во время воспроизведения кнопку ❚❚. Для возобновления обычного воспроизведения нажмите кнопку ❚❚ или кнопку ▶.

Для ускоренной перемотки ленты вперед

Нажмите в режиме остановки кнопку ▶▶. Для возобновления обычного воспроизведения нажмите кнопку ▶.

Для ускоренной перемотки ленты назад

Нажмите в режиме остановки кнопку ◀◀. Для возобновления обычного воспроизведения нажмите кнопку ▶.

Для изменения направления воспроизведения

Нажмите кнопку < на пульте дистанционного управления во время воспроизведения для изменения направления воспроизведения. Для возобновления обычного воспроизведения, отпустите кнопку ▶.

Для отыскания эпизода во время контроля изображения (поиск изображения)

Держите нажатой кнопку ◀◀ или ▶▶ во время воспроизведения. Для восстановления обычного воспроизведения отпустите кнопку.

Для контроля изображения на высокой скорости во время ускоренной перемотки ленты вперед или назад (поиск методом прогона)

Держите нажатой кнопку ◀◀ во время ускоренной перемотки ленты назад или кнопку ▶▶ во время ускоренной перемотки ленты вперед. Для возобновления обычной перемотки ленты вперед или назад отпустите кнопку.

Для просмотра воспроизведения изображения на замедленной скорости (замедленное воспроизведение)

Нажмите во время воспроизведения кнопку ❚▶ на пульте дистанционного управления. Для замедленного воспроизведения в обратном направлении нажмите кнопку <, а затем нажмите кнопку ❚▶ на пульте дистанционного управления. Для возобновления обычного воспроизведения нажмите кнопку ▶.

To view the picture at double speed

Press ×2 on the Remote Commander during playback. For double speed playback in the reverse direction, press <, then press ×2 on the Remote Commander. To resume normal playback, press ▶.

To view the picture frame-by-frame

Press ❚❚▶ on the Remote Commander in the playback pause mode. For frame-by-frame playback in the reverse direction, press ◀❚❚. To resume normal playback, press ▶.

To search the last scene recorded (END SEARCH)

Press END SEARCH in the stop mode. The last 5 seconds of the recorded section plays back and stops.

In the various playback modes
- Noise may appear when your camcorder plays back tapes recorded in the Hi8/standard 8 system.
- Sound is muted.
- The previous recording may appear as a mosaic image when playing back in the Digital8 system.

Notes on the playback pause mode
- When the playback pause mode lasts for 3 minutes, your camcorder automatically enters the stop mode. To resume playback, press ▶.
- The previous recording may appear.

Slow playback for tapes recorded in the Digital8 system
The slow playback can be performed smoothly on your camcorder; however, this function does not work for an output signal from the DV OUT jack.

When you play back a tape in reverse
Horizontal noise may appear at the center or top and bottom of the screen. This is not a malfunction.

Для просмотра воспроизведения изображения на удвоенной скорости

Нажмите кнопку ×2 на пульте дистанционного управления во время воспроизведения. Для воспроизведения на удвоенной скорости в обратном направлении нажмите кнопку <, а затем кнопку ×2 на пульте дистанционного управления. Для возобновления обычного воспроизведения нажмите кнопку ▶.

Для покадрового просмотра воспроизведения изображения

Нажмите кнопку ❚❚▶ на пульте дистанционного управления в режиме паузы воспроизведения. Для покадрового воспроизведения в обратном направлении нажмите кнопку ◀❚❚. Для возобновления обычного воспроизведения нажмите кнопку ▶.

Для поиска последнего записанного эпизода (END SEARCH)

Нажмите кнопку END SEARCH в режиме остановки. Будут воспроизведены последние 5 секунд записанного участка на ленте, после чего воспроизведение остановится.

В переменных режимах воспроизведения
- При воспроизведении на видеокамере лент Hi8/8 могут появиться помехи
- Звук будет приглушен.
- При воспроизведении в цифровой системе Digital8 изображение предыдущих записей может стать мозаичным.

Если режим паузы воспроизведения продлится 3 минуты
- Ваша видеокамера автоматически войдет в режим остановки. Для возобновления воспроизведения нажмите кнопку ▶.
- Может появиться предыдущая запись.

Замедленное воспроизведение для лент, записанных в цифровой системе Digital8
Замедленное воспроизведение может выполняться на Вашей видеокамере без помех; однако эта функция не работает через выходной сигнал из гнезда DV OUT.

При воспроизведении ленты в обратном направлении
На экране могут появиться горизонтальные помехи по центру или же вверху и внизу экрана. Это не является неисправностью.

Viewing the recording on TV

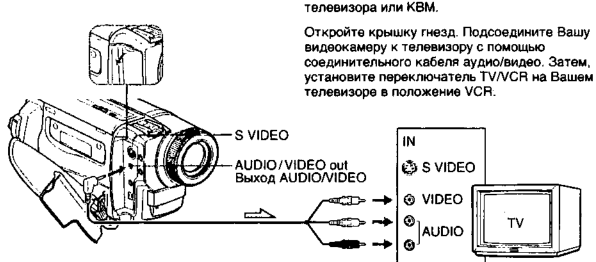
Connect your camcorder to your TV or VCR with the A/V connecting cable supplied with your camcorder to watch the playback picture on the TV screen. You can operate the playback control buttons in the same way as when you monitor playback pictures on the LCD screen. When monitoring the playback picture on the TV screen, we recommend that you power your camcorder from the mains using the AC power adaptor (p. 13). Refer to the operating instructions of your TV or VCR.

Open the jack cover. Connect your camcorder to the TV using the A/V connecting cable. Then, set the TV/VCR selector on the TV to VCR.

Просмотр записи на экране телевизора

Подсоедините Вашу видеокамеру к Вашему телевизору или КВМ с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере для просмотра воспроизводимого изображения на экране телевизора. Вы можете оперировать кнопками управления воспроизведением таким же способом, как при управлении воспроизводимым изображением на экране ЖКД. При управлении воспроизводимым изображением на экране телевизора рекомендуется подключить питание к Вашей видеокамере от сетевой розетки с помощью сетевого адаптера переменного тока (стр. 13). См. инструкцию по эксплуатации Вашего телевизора или КВМ.

Откройте крышку гнезд. Подсоедините Вашу видеокамеру к телевизору с помощью соединительного кабеля аудио/видео. Затем, установите переключатель TV/VCR на Вашем телевизоре в положение VCR.



⇨ : Signal flow/Передача сигнала

If your TV is already connected to a VCR

Connect your camcorder to the LINE IN input on the VCR by using the A/V connecting cable supplied with your camcorder. Set the input selector on the VCR to LINE.

If your TV or VCR is a monaural type

Connect the yellow plug of the A/V connecting cable to the video input jack and the white or the red plug to the audio input jack on the VCR or the TV. If you connect the white plug, the sound is L (left) signal. If you connect the red plug, the sound is R (right) signal.

Если Ваш телевизор уже подсоединен к КВМ

Подсоедините Вашу видеокамеру к входному гнезду LINE IN на КВМ с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере. Установите селектор входного сигнала на КВМ в положение LINE.

Если Ваш телевизор или КВМ монофонического типа

Подсоедините желтый штекер соединительного кабеля аудио/видео к входному гнезду видеосигнала и белый или красный штекер к входному гнезду аудиосигнала на КВМ или телевизоре.
Если Вы подсоедините белый штекер, то будет звук L (левый) канал.
Если Вы подсоедините красный штекер, то будет звук R (правый) канал.

Viewing the recording on TV

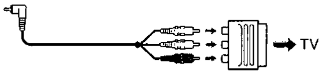
Просмотр записи на экране телевизора

If your TV/VCR has a 21-pin connector (EUROCONNECTOR)

Use the 21-pin adaptor supplied with your camcorder.

Если в Вашем телевизоре/КВМ имеется 21-штырьковый разъем (EUROCONNECTOR)

Используйте 21-штырьковый адаптер, прилагаемый к Вашей видеокамере.



If your TV or VCR has an S video jack
Connect using an S video cable (not supplied) to obtain high-quality pictures. With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable. Connect the S video cable (not supplied) to the S video jacks on both your camcorder and the TV or the VCR.

Если в Вашем телевизоре или КВМ имеется гнездо S видео
Выполните соединение с помощью кабеля S видео (не прилагается) для получения высококачественного изображения. При данном соединении Вам не нужно подсоединять желтый штекер (видео) соединительного кабеля аудио/видео. Подсоедините кабель S видео (не прилагается) к гнездам S видео на Вашей видеокамере и Вашем телевизоре или КВМ.

Viewing the recording on TV

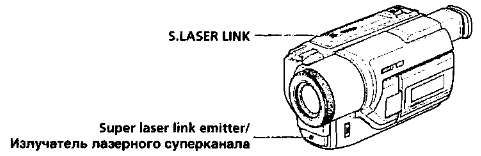
Просмотр записи на экране телевизора

Using the AV cordless IR receiver

Once you connect the AV cordless IR receiver (not supplied) to your TV or VCR, you can easily view the picture on your TV. For details, refer to the operating instructions of the AV cordless IR receiver.

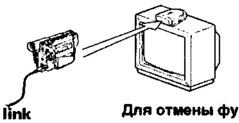
Использование беспроводного ИК аудиовидеоприемника

После подсоединения беспроводного ИК аудиовидеоприемника к Вашему телевизору (не прилагается) Вы можете легко наблюдать изображение на экране Вашего телевизора. Подробные сведения содержатся в инструкции по эксплуатации беспроводного ИК аудиовидеоприемника.



(1) After connecting your TV and AV cordless IR receiver, set the POWER switch on the AV cordless IR receiver to ON.
(2) Turn the TV on and set the TV/VCR selector on the TV to VCR.
(3) Press S.LASER LINK. The lamp of S.LASER LINK lights up.
(4) Press ► on your camcorder to start playback.
(5) Point the super laser link emitter at the AV cordless IR receiver. Adjust the position of your camcorder and the AV cordless IR receiver to obtain clear playback pictures.

(1) После подсоединения к Вашему телевизору беспроводного ИК аудиовидеоприемника установите переключатель POWER на беспроводном ИК аудиовидеоприемнике в положение ON.
(2) Включите телевизор и установите селектор TVC/VCR на телевизоре в положение VCR.
(3) Нажмите кнопку S.LASER LINK. Высветится лампочка S.LASER LINK.
(4) Нажмите кнопку ► на Вашей видеокамере для начала включения воспроизведения.
(5) Направьте излучатель лазерного суперканала на беспроводный ИК аудиоприемник. Отрегулируйте положение Вашей видеокамеры и беспроводного ИК аудиовидеоприемника для получения четкого воспроизводимого изображения.



To cancel the super laser link function
Press S.LASER LINK. The lamp on the S.LASER LINK button goes out.

If you turn the power off
Super laser link function turns off automatically.
Note
When super laser link is activated (the S.LASER LINK button is lit), your camcorder consumes power. Press S.LASER LINK to turn off the super laser link function when it is not needed.

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Для отмены функции лазерного суперканала передачи сигналов
Нажмите кнопку S.LASER LINK. Лампочка на кнопке S.LASER LINK погаснет.

Если Вы выключите питание
Лазерный суперканал передачи сигналов выключится автоматически.
Примечание
При включенном лазерном суперканале передачи сигналов (при этом высвечивается кнопка S.LASER LINK) Ваша видеокамера потребляет питание. Нажмите кнопку S.LASER LINK для выключения функции лазерного канала передачи сигналов, если она не требуется.

является фирменным знаком Sony Corporation

— Advanced Recording Operations —

Recording a still image on a tape – Tape Photo recording

— Усовершенствованные операции съемки —

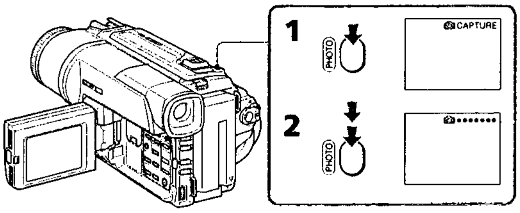
Запись неподвижного изображения на ленту – фотосъемка на ленту

You can record a still image like a photograph. This mode is useful when you want to record a picture such as a photograph or when you print a picture using a video printer (not supplied).
You can record about 510 images in the SP mode and about 765 images in the LP mode on a tape which can record for 60 minutes in the SP mode. Besides the operation described here, your camcorder can record still images on the "Memory Stick"s (p. 91) (DCR-TRV320E only).

(1) In the standby mode, keep pressing PHOTO lightly until a still image appears. The CAPTURE indicator appears. Recording does not start yet.
To change the still image, release PHOTO, select a still image again, and then press and hold PHOTO lightly.
(2) Press PHOTO deeper.
The still image on the LCD screen or in the viewfinder is recorded for about seven seconds. The sound during those seven seconds is also recorded.
The still image is displayed on the LCD screen or in the viewfinder untill recording is completed.

Вы можете записывать неподвижное изображение подобно фотографии. Данный режим полезен, если Вы хотите записывать изображение в виде фотоснимка или же при выполнении отпечатков с помощью видеопринтера (не прилагается).
Вы можете записать около 510 изображений в режиме SP и около 765 изображений в режиме LP ленте, которая позволяет выполнять запись в течение 60 минут в режиме SP. Кроме описанной здесь операции, Ваша видеокамера может выполнить запись неподвижных изображений на "Memory Stick" (стр. 91) (только DCR-TRV320E).

(1) В режиме ожидания держите слегка нажатой кнопку PHOTO до тех пор, пока не появится неподвижное изображение. Появится индикатор CAPTURE. Запись пока еще не началась. Для изменения неподвижного изображения отпустите кнопку PHOTO, выберите неподвижное изображение снова, а затем нажмите и держите слегка нажатой кнопку PHOTO.
(2) Нажмите кнопку PHOTO сильнее.
Неподвижное изображение в видоискателе или на экране ЖКД будет записываться около семи секунд. В течение этих семи секунд будет записываться и звук.
Неподвижное изображение будет отображаться на экране ЖКД или в видоискателе тех пор, пока запись не будет завершена.



Recording a still image on a tape – Tape Photo recording

Запись неподвижного изображения на ленту – фотосъемка на ленту

Notes
- During the tape photo recording, you cannot change the mode or setting.
- The PHOTO button does not work:
  - while the digital effect function is set or in use.
  - while the fader function is in use.
- When recording a still image, do not shake your camcorder. Mosaic-pattern noise may appear on the image.

To use the tape photo recording function using the Remote Commander
Press PHOTO in the Remote Commander. Your camcorder records an image on the LCD screen or in the viewfinder immediately.

When you use the tape photo recording function during normal CAMERA recording
You cannot check an image on the LCD screen or in the viewfinder by pressing PHOTO lightly. Press PHOTO deeper. The still image is then recorded for about seven seconds, and your camcorder returns to the standby mode. During the seven seconds to record, you cannot shoot another still image.

Примечания
- Во время фотосъемки на ленту Вы не можете изменять режим или установку.
- Кнопка PHOTO не работает:
  - если установлена или используется функция цифрового эффекта.
  - если используется функция фейдера.
- При записи неподвижного изображения не трясите Вашу видеокамеру. Иначе на изображении могут появиться помехи мозаичного типа.

Для использования функции фотосъемки на ленту с помощью пульта дистанционного управления
Нажмите кнопку PHOTO на пульте дистанционного управления. Ваша видеокамера тотчас же начнет запись изображения на экране ЖКД или в видоискателе.

При использовании функции фотосъемки на ленту во время обычной записи CAMERA
Вы не можете проверить изображение на экране ЖКД или в видоискателе, слегка нажав кнопку PHOTO. Нажмите кнопку PHOTO сильнее. Неподвижное изображение будет записываться около семи секунд, а затем видеокамера вернется в режим ожидания. В течение этих семи секунд записи Вы не можете выполнять съемку другого неподвижного изображения.

Recording a still image on a tape – Tape Photo recording

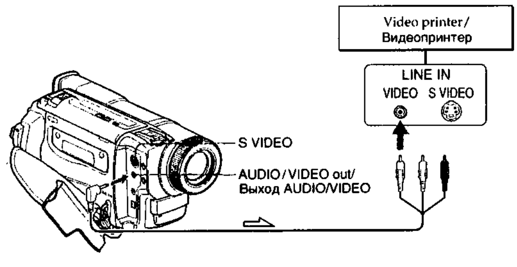
Printing the still image

You can print a still image by using the video printer (not supplied). Connect the video printer using the A/V connecting cable supplied with your camcorder.
Connect the A/V connecting cable to the AUDIO/VIDEO out jack and connect the yellow plug of the cable to the video input of the video printer. Refer to the operating instructions of the video printer as well.

Запись неподвижного изображения на ленту – фотосъемка на ленту

Печатание неподвижного изображения

Вы можете выполнить печатание неподвижного изображения с помощью видеопринтера (не прилагается).
Подсоедините видеопринтер с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере. Подсоедините соединительный кабель аудио/видео к выходному гнезду AUDIO/VIDEO и подсоедините желтый штекер кабеля к входному гнезду видеосигнала на видеопринтере. Воспользуйтесь также инструкцией по эксплуатации видеопринтера.



⇨ : Signal flow/Передача сигнала

If the video printer is equipped with S video input
Use the S video connecting cable (not supplied). Connect it to the S VIDEO jack and the S video input of the video printer.

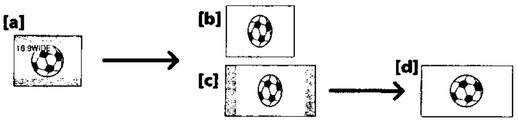
Если в видеопринтере имеется входное гнездо S видео
Используйте соединительный кабель кабель S видео (не прилагается). Подсоедините его к гнезду S VIDEO и ко входному гнезду S видео на видеопринтере.

Using the wide mode

You can record a 16:9 wide picture to watch on the 16:9 wide-screen TV (16:9WIDE).
Black bands appear on the LCD screen or in the viewfinder (DCR-TRV320E only) during recording in 16:9WIDE mode **[a]**. The picture during playing back in the viewfinder (DCR-TRV120E/TRV125E), on a normal TV **[b]** or a wide-screen TV **[c]** are compressed in the widthwise direction. If you set the screen mode of the wide-screen TV to the full mode, you can watch pictures of normal images **[d]**.

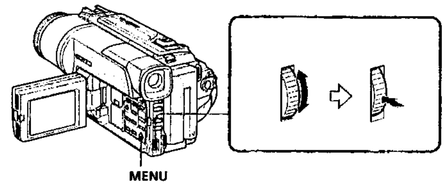
Использование широкоэкранного режима

Вы можете записывать широкоформатное изображение 16:9 для просмотра на широкоэкранном телевизоре формата 16:9 (16:9WIDE).
Во время записи в режиме 16:9WIDE на экране ЖКД или в видоискателе (только DCR-TRV320E) появятся черные полосы **[a]**. Изображение во время воспроизведения в видоискателе (DCR-TRV120E/TRV125E) на обычном телевизоре **[b]** или на широкоэкранном телевизоре **[c]** будет сжато по ширине. Если Вы установите режим экрана широкоэкранного телевизора в полноэкранный режим, Вы можете наблюдать обычные изображения без искажений **[d]**.



In the standby mode, set 16:9WIDE to ON in the menu settings (p. 76).

В режиме ожидания установите команду 16:9WIDE в положение ON в установках меню (стр. 76).



To cancel the wide mode
Set 16:9WIDE to OFF in the menu settings.

Для отмены широкоэкранного режима
Установите команду 16:9WIDE в положение OFF в установках меню.

In the wide mode, you cannot select the following functions:
- Old movie
- Bounce

During recording
You cannot select or cancel the wide mode. When you cancel the wide mode, set your camcorder to the standby mode and then set 16:9WIDE to OFF in the menu setting.

В широкоэкранном режиме не можете выбирать следующие функции:
- Старинное кино
- Пересканивания

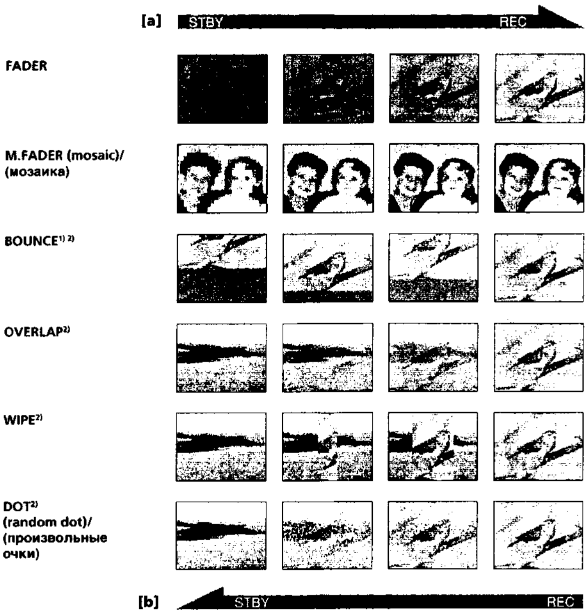
Во время записи
Вы не можете выбрать или отменить широкоэкранный режим. Если Вы отмените широкоэкранный режим, установите Вашу видеокамеру в режим ожидания, а затем установите команду 16:9 WIDE в положение OFF в установках меню.

Using the fader function

You can fade the picture in or out to give your recording a professional appearance.

Использование функции фейдера

Вы можете выполнять плавное введение и выведение изображения, чтобы придать Вашей съемке профессиональный вид.



MONOTONE
When fading in, the picture gradually changes from black-and-white to colour.
When fading out the picture gradually changes from colour to black-and-white.

MONOTONE
При введении изображение будет постепенно изменяться от черно-белого до цветного.
При выведении изображение будет постепенно изменяться от цветного до черно-белого.

[1] You can use this function only when D ZOOM is set to OFF in the menu settings.

[2] Fade in only

[1] Вы можете использовать эту функцию только если команда D ZOOM установлена в положение OFF в установках меню.

[2] Только введение изображения

Using the fader function

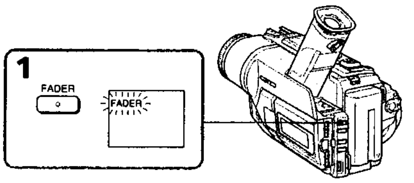
(1) When fading in [a]
In the standby mode, press FADER until the desired fader indicator flashes.
When fading out [b]
In the recording mode, press FADER until the desired fader indicator flashes.
The indicator changes as follows:
FADER → M.FADER → BOUNCE → MONOTONE → OVERLAP → WIPE → DOT
The last selected fader mode is indicated first of all.

(2) Press START/STOP. The fader indicator stops flashing.
After the fade in/out is carried out, your camcorder automatically returns to the normal mode.

Использование функции фейдера

(1) При введении изображения [a]
В режиме ожидания, нажимайте кнопку FADER до тех пор, пока не начнет мигать нужный индикатор фейдера.
При выведении изображения [b]
В режиме записи, нажимайте кнопку FADER до тех пор, пока не начнет мигать нужный индикатор фейдера.
Индикатор будет изменяться следующим образом:
FADER → M.FADER → BOUNCE → MONOTONE → OVERLAP → WIPE → DOT
Последний из выбранных режимов фейдера отображается первым.

(2) Нажмите кнопку START/STOP. Индикатор фейдера перестанет мигать.
После того, как выполнено введение/выведение изображения, ваша видеокамера автоматически вернется в обычный режим.



To cancel the fader function
Before pressing START/STOP, press FADER until the indicator disappears.

Для отмены функции фейдера
Перед тем, как нажать кнопку START/STOP, нажимайте кнопку FADER до тех пор, пока не исчезнет индикатор.

Using the Fader function

Notes
- The overlap, wipe and dot functions work only for tapes recorded in the Digital8 Ⅱ system.
- You cannot use the following functions while using the fader function. Also, you cannot use the fader function while using the following functions:
  - Digital effect
  - Low lux mode of PROGRAM AE (Overlap, wipe or dot function only)
  - Super NightShot
  - Tape photo recording

Before operating the overlap, wipe or dot function
Your camcorder stores the image on the tape. As the image is being stored, the indicator flashes quickly, and the image you are shooting disappears from the LCD or viewfinder screen. Depending on the tape condition, the image may not be recorded clearly.

While using the bounce function, you cannot use the following functions:
- Focus
- Zoom
- Picture effect

Note on the bounce function
The BOUNCE indicator does not appear in the following mode or functions:
- D ZOOM is activated in the menu settings
- 16:9 WIDE
- Picture effect
- PROGRAM AE

Использование функции фейдера

Примечание
- Функция наложения изображения работает только лент, записанных в цифровой системе Digital8 Ⅱ.
- Вы не можете использовать следующие функции во время использования функции фейдера. Также, Вы не можете использовать функцию фейдера во время использования следующих функций:
  - Цифровой эффект
  - Режим низкой освещенности PROGRAM AE (только функция наложения, вытеснения шторкой или точечного изображения)
  - Ночная суперсъемка
  - Фотосъемка ра ленту

Перед тем, как включить функцию наложения, вытеснения шторкой или точечного изображения
Ваша видеокамера хранит изображение на ленте. Во время сохранения изображения индикатор мигает быстро. а изображение. которое Вы снимаете, исчезнет с экрана ЖКД или экрана видоискателя. В зависимости от состояния ленты, изображение может быть записано нечетко.

Во время использования функции перескакивания Вы не можете использовать следующие функции:
- Фокусировка
- Трансфокация
- Эффект изображения

Примечание по функции перескакивания
Индикатор BOUNCE не появляется в следующих режимах или при использовании следующих функций:
- Команда D ZOOM приведена в действие в установках меню
- 16:19WIDE
- Эффект изображения
- PROGRAM AE

Using special effects – Picture effect

You can digitally process images to obtain special effects like those in films or on the TV.

NEG. ART [a] : The colour and brightness of the image is reversed.
SEPIA : The image is sepia.
B&W : The image is monochrome (black-and-white).
SOLARIZE [b] : The light intensity is clearer, and the image looks like an illustration.
SLIM [c] : The image expands vertically.
STRETCH [d] : The image expands horizontally.
PASTEL [e] : The contrast of the image is emphasized, and the image looks like an animated cartoon.
MOSAIC [f] : The image is mosaic.

специальных эффектов – Эффект изображения

Вы можете выполнять обработку изображения цифровым методом для получения специальных эффектов, как в кинофильмах или на экранах телевизоров.

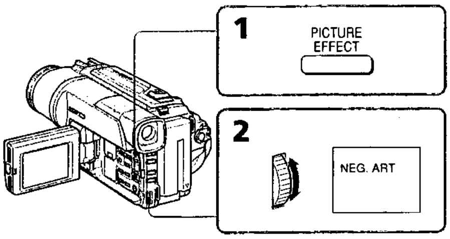
NEG. ART [a] : Цвет и яркость изображения будут негативными.
SEPIA : Изображение будет в цвете сепии.
B&W : Изображение будет монохроматическим (черно-белым).
SOLARIZE [b] : Яркость света будет усиленной, а изображение будет выглядеть как иллюстрация.
SLIM [c] : Изображение растянется по вертикали.
STRETCH [d] : Изображение растянется по горизонтали.
PASTEL [e] : Подчеркивается контрастность изображения, которому придается мультипликационный вид.
MOSAIC [f] : Изображение будет мозаическим.

Using special effects – Picture effect

(1) Press PICTURE EFFECT in CAMERA mode.
The picture effect indicator appears.
(2) Turn the SEL/PUSH EXEC dial to select the desired picture effect mode.
The indicator changes as follows:
NEG.ART ←→ SEPIA ←→ B&W ←→ SOLARIZE ←→ SLIM ←→ STRETCH ←→ PASTEL ←→ MOSAIC

Использование специальных эффектов – Эффект изображения

(1) Нажмите кнопку PICTURE EFFECT в режиме CAMERA.
Появится индикатор эффекта изображения.
(2) Поверните диск SEL/PUSH EXEC для выбора режима нужного эффекта изображения.
Индикатор будет изменяться следующим образом:
NEG.ART ←→ SEPIA ←→ B&W ←→ SOLARIZE ←→ SLIM ←→ STRETCH ←→ PASTEL ←→ MOSAIC



To turn the picture effect function off
Press PICTURE EFFECT.

Для выключения функции эффекта изображения
Нажмите кнопку PICTURE EFFECT.

While using the picture effect function
You cannot select OLD MOVIE with DIGITAL EFFECT.

When you turn the power off
The picture effect will be automatically canceled.

При использовании функции эффекта изображения
Вы не можете выбрать режим OLD MOVIE кино с помощью функции DIGITAL EFFECT.

Если Вы выключите питание
Ваша видеокамера автоматически вернется в обычный режим.

Using special effects – Digital effect

You can add special effects to recorded images using the various digital functions. The sound is recorded normally.

STILL
You can record a still image so that it is superimposed on a moving image.

FLASH (FLASH MOTION)
You can record still images successively at constant intervals.

LUMI. (LUMINANCEKEY)
You can swap a brighter area in a still image with a moving image.

TRAIL
You can record the image so that an incidental image like a trail is left.

SLOW SHTR (SLOW SHUTTER)
You can slow down the shutter speed. The slow shutter mode is good for recording dark images more brightly. However, the picture may be less clear.

OLD MOVIE
You can add an old movie type atmosphere to images. Your camcorder automatically sets the wide mode to ON, image effect to SEPIA, and the appropriate shutter speed.

Использование специальных эффектов – Цифровой эффект

Вы можете добавлять специальные эффекты к записываемому изображению с помощью разных цифровых функций. Записываемый звук будет обычным.

STILL
Вы можете записывать неподвижное изображение, которое можно налагать на подвижное изображение.

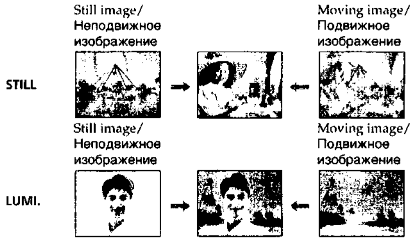
FLASH (FLASH MOTION)
Вы можете записывать неподвижные изображения в последовательности через определенные интервалы.

LUMI. (LUMINANCEKEY)
Вы можете изменять яркие места на неподвижном изображении на подвижные изображения.

TRAIL
Вы можете записывать изображение с эффектом запаздывания.

SLOW SHTR (SLOW SHUTTER)
Вы можете замедлить скорость затвора. Режим медленного затвора является подходящим для записи темных изображений в более ярком свете. Однако, изображение может получиться менее четким.

OLD MOVIE
Вы можете привносить атмосферу старинного кино в изображения. Ваша видеокамера будет автоматически устанавливать широкоэкранный режим в положение ON, эффект изображения в положение SEPIA, и выставлять соответствующую скорость затвора.


Still image/ Неподвижное изображение
Moving image/ Подвижное изображение
STILL
Still image/ Неподвижное изображение
Moving image/ Подвижное изображение
LUMI.

Using special effects – Digital effect

(1) While your camcorder is in CAMERA mode, press DIGITAL EFFECT. The digital effect indicator appears.
(2) Turn the SEL/PUSH EXEC dial to select the desired digital effect mode.
The indicator changes as follows:
STILL ←→ FLASH ←→ LUMI. ←→ TRAIL ←→ SLOW SHTR ←→ OLD MOVIE
(3) Press the SEL/PUSH EXEC dial. The indicator lights up and the bars appear. In the STILL and LUMI. modes, the still image is stored in memory.
(4) Turn the SEL/PUSH EXEC dial to adjust the effect as follows:

STILL – The rate of the still image you want to superimpose on the moving picture
FLASH – The interval of flash motion
LUMI. – The colour scheme of the area in the still image which is to be swapped with a moving picture
TRAIL – The vanishing time of the incidental image
SLOW SHTR – Shutter speed. The larger the shutter speed number, the slower the shutter speed.
OLD MOVIE – No adjustment necessary

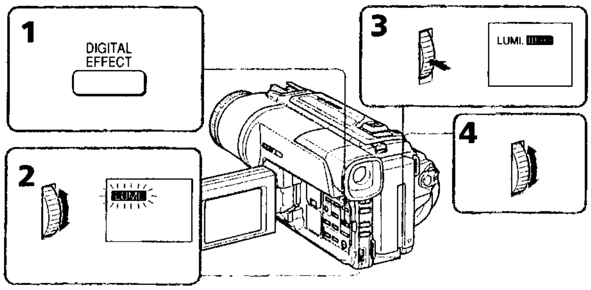
The more bars there are on screen, the stronger the digital effect. The bars appear in the following modes: STILL, FLASH, LUMI. and TRAIL.

Использование специальных эффектов – Цифровой эффект

(1) В то время, когда Ваша видеокамера находится в режиме CAMERA, нажмите кнопку DIGITAL EFFECT. Появится индикатор цифрового эффекта.
(2) Поверните диск SEL/PUSH EXEC для выбора режима нужного цифрового эффекта.
Индикатор будет изменяться следующим образом:
STILL ←→ FLASH ←→ LUMI. ←→ TRAIL ←→ SLOW SHTR ←→ OLD MOVIE
(3) Нажмите диск SEL/PUSH EXEC.
Высветится индикатор и появятся полосы. В режимах STILL и LUMI. неподвижное изображение будет сохранено в памяти.
(4) Поверните диск SEL/PUSH EXEC для регулировки эффекта:

STILL – Интенсивность неподвижного изображения, которое Вы хотите наложить на подвижное изображение
FLASH – Интервал прерывистого движения
LUMI. – Цветовая гамма участка на неподвижном изображении, который будет заменен на подвижное изображение
TRAIL – Время исчезания побочного изображения
SLOW SHTR – Скорость затвора. Чем больше величина скорости затвора, тем медленнее скорость затвора
OLD MOVIE – Не требуется никаких регулировок

Чем больше полос на экране, тем сильнее цифровой эффект. Полосы появляются в следующих режимах: STILL, FLASH, LUMI. и TRAIL.



Using special effects – Digital effect

To cancel the digital effect
Press DIGITAL EFFECT.

Notes
- The following functions do not work during digital effect:
  - Fader
  - Low lux mode of PROGRAM AE
  - Tape photo recording
  - Super NightShot
- The following functions do not work in the slow shutter mode:
  - Exposure
  - PROGRAM AE
- The following functions do not work in the old movie mode:
  - Exposure
  - 16:9 WIDE
  - Picture effect
  - PROGRAM AE

When you turn the power off
The digital effect will be automatically canceled.

When recording in the slow shutter mode
Auto focus may not be effective. Focus manually using a tripod.

Shutter speed

Shutter speed number	Shutter speed
SLOW SHTR 1	1/25
SLOW SHTR 2	1/12
SLOW SHTR 3	1/6
SLOW SHTR 4	1/3

Использование специальных эффектов – Цифровой эффект

Для отмены цифрового эффекта
Нажмите кнопку DIGITAL EFFECT.

Примечания
- Следующие функции не работают при использовании цифрового эффекта:
  - Фейдер
  - Режим низкой освещенности PROGRAM AE
  - Фотосъемка на ленту
  - Ночная суперсъемка
- Следующие функции не работают в режиме медленного затвора:
  - Экспозиция
  - PROGRAM AE
- Следующие функции не работают в режиме старинного кино:
  - Экспозиция
  - 16:9WIDE
  - Эффект изображения
  - PROGRAM AE

При выключении питания
Цифровой эффект будет автоматически отменен.

При записи в режиме медленного затвора
Автоматическая фокусировка может быть не эффективной. Выполните фокусировку вручную, используя треногу.

Скорость затвора

Величина скорости затвора	Скорость затвора
SLOW SHTR1	1/25
SLOW SHTR2	1/12
SLOW SHTR3	1/6
SLOW SHTR4	1/3

Using the PROGRAM AE function

You can select PROGRAM AE (Auto Exposure) mode to suit your specific shooting requirements.

Spotlight mode
This mode prevents people's faces, for example, from appearing excessively white when shooting subjects lit by strong light in the theatre.

Soft portrait mode
This mode brings out the subject while creating a soft background for subjects such as people or flowers.

Sports lesson mode
This mode minimizes shake on fast-moving subjects such as in tennis or golf.

Beach & ski mode
This mode prevents people's faces from appearing dark in strong light or reflected light, such as at a beach in midsummer or on a ski slope.

Sunset & moon mode
This mode allows you to maintain atmosphere when you are recording sunsets, general night views, fireworks displays and neon signs.

Landscape mode
This mode is for when you are recording distant subjects such as mountains and prevents your camcorder from focusing on glass or metal mesh in windows when you are recording a subject behind glass or a screen.

Low lux mode
This mode makes subjects brighter in insufficient light.

Использование функции PROGRAM AE

Вы можете выбрать режим PROGRAM AE (автоматическая съемка) в соответствии со специфическими требованиями к съемке.

Режим прожекторного освещения
Данный режим предотвращает, к примеру, лица людей от появления в чрезмерно белом свете при выполнении съемки людей, освещенных сильным светом на свадебных церемониях или в театре.

Мягкий портретный режим
Этот режим позволяет выделить объект на фоне мягкого фона, и подходит для съемки, например, людей или цветов.

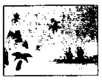
Режим спортивных состязаний
Этот режим позволяет минимизировать дрожание при съемке быстро движущихся предметов, например, при игре в теннис или гольф.

Пляжный и лыжный режим
Этот режим предотвращает появление темных лиц людей в зоне сильного света или отраженного света, например, на пляже в разгар лета или на снежном склоне.

Режим захода солнца и луны
Этот режим позволяет в точности отражать обстановку при съемке заходов солнца, общих ночных видов, фейерверков и неоновых реклам.

Ландшафтный режим
Этот режим позволяет выполнять съемку отдаленных объектов, таких как горы, например, и предотвращает фокусировку видеокамеры на стекло или металлическую решетку на окнах, когда Вы выполняете запись объектов позади стекла или решетки.

Режим низкой освещенности
Этот режим делает объекты ярче при недостаточном освещении.

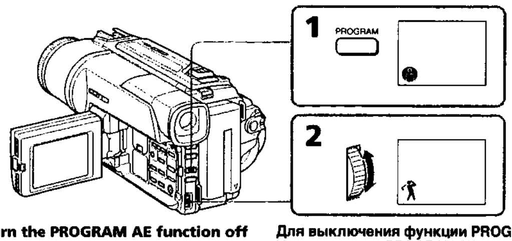


Using the PROGRAM AE function

(1) Press PROGRAM AE in CAMERA or MEMORY (DCR-TRV320E only) mode. The indicator appears.
(2) Turn the SEL/PUSH EXEC dial to select the desired mode.
The indicator changes as follows:

Использование функции PROGRAM AE

(1) Нажмите кнопку PROGRAM AE в режиме CAMERA или MEMORY (Только DCR-TRV320E). Появится индикатор.
(2) Поверните диск SEL/PUSH EXEC для выбора нужного режима.
Индикатор будет изменяться следующим образом:



To turn the PROGRAM AE function off
Press PROGRAM AE.

Notes
- In the spotlight, sports lesson and beach & ski modes, you cannot take close-ups. This is because your camcorder is set to focus only on subjects in the middle to far distance.
- In the sunset & moon and landscape modes, your camcorder is set to focus only on distant subjects.
- The following functions do not work in the PROGRAM AE mode:
  - Slow shutter
  - Old movie
  - Bounce
- The following functions do not work in the low lux mode:
  - Digital effect
  - Overlap
  - Wipe
  - Dot
  - Exposure
- While setting the NIGHTSHOT to ON, the PROGRAM AE function does not work. (The indicator flashes.)
- While shooting in MEMORY (DCR-TRV320E only) mode, the low lux mode does not work. (The indicator flashes).

If you are recording under a discharge tube such as a fluorescent lamp, sodium lamp or mercury lamp
Flickering or changes in colour may occur in the following modes. If this happens, turn the PROGRAM AE function off.
- Soft portrait mode
- Sports lesson mode

Для выключения функции PROGRAM AE
Нажмите кнопку PROGRAM AE.

Примечания
- В режимах прожекторного освещения, спортивных состязаний, а также в пляжном и лыжном режиме Вы можете выполнять съемку крупным планом. Это объясняется тем, что Ваша видеокамера настроена для фокусировки только на объекты, находящиеся на среднем и дальнем расстояниях.
- В режиме захода солнца и луны, а также в ландшафтном режиме Ваша видеокамера настроена на фокусировку только на дальние объекты.
- Следующие функции не работают в режиме PROGRAM AE:
  - Медленный затвор
  - Старинное кино
  - Перескакивание
- Следующие функции не работают в режиме низкой освещенности:
  - Цифровой эффект
  - Наложение изображения
  - Ночная съемка
  - Точечное изображение
  - Экспозиция
- Во время установки команды NIGHTSHOT в положение ON, функция PROGRAM AE не работает. (Индикатор будет мигать).
- Во время съемки в режиме MEMORY (Только DCR-TRV320E), режим низкой освещенности не работает. (Индикатор будет мигать).

Если Вы выполняете запись при использовании газоразрядной лампы, натриевой лампы или ртутной лампы
В следующих режимах может возникнуть мерцание или неустойчивые процессы. Если это произойдет, выключите функцию PROGRAM AE.
- Мягкий портретный режим
- Режим спортивных состязаний

Adjusting the exposure manually

You can manually adjust and set the exposure. Adjust the exposure manually in the following cases:

- The subject is backlit
- Bright subject and dark background
- To record dark pictures (e.g. night scenes) faithfully

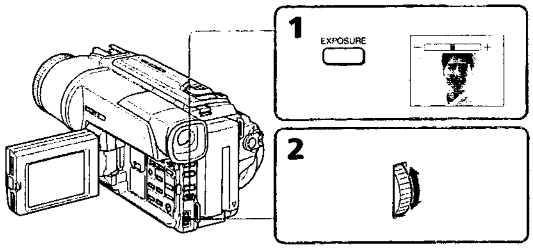
(1) In CAMERA or MEMORY (DCR-TRV320E only) mode, press EXPOSURE.
The exposure indicator appears on the LCD screen or in the viewfinder.
(2) Turn the SEL/PUSH EXEC dial to adjust the brightness.

Регулировка экспозиции вручную

Вы можете отрегулировать и установить экспозицию вручную.
Отрегулируйте экспозицию вручную в следующих случаях:

- Объект на фоне задней подсветки
- Яркий объект на темном фоне
- Для записи темных изображений (например, ночных сцен) с большой достоверностью

(1) В режиме CAMERA или MEMORY (Только DCR-TRV320E), нажмите кнопку EXPOSURE.
На экране ЖКД или в видоискателе появится индикатор экспозиции.
(2) Поверните диск SEL/PUSH EXEC для регулировки яркости.



To return to the automatic exposure mode

Press EXPOSURE.

Notes

- When you adjust the exposure manually, the following function and modes do not work in CAMERA or MEMORY (DCR-TRV320E only) mode:
  - Backlight
  - Old movie
  - Slow shutter
- When you adjust the exposure manually, the backlight function does not work in MEMORY (DCR-TRV320E only) mode.

Your camcorder automatically returns to the automatic mode:

- if you change the PROGRAM AE mode
- if you slide NIGHTSHOT to ON

Для возврата в режим автоматической экспозиции

Нажмите кнопку EXPOSURE.

Примечания

- При выполнении регулировки экспозиции вручную, следующие функции и режимы не работают в режиме CAMERA или MEMORY (Только DCR-TRV320E).
  - Задняя подсветка
  - Старинное кино
  - Медленный затвор
- При выполнении регулировки экспозиции вручную, функция задней подсветки не работает в режиме MEMORY (Только DCR-TRV320E).

Ваша видеокамера автоматически вернется в режим автоматической экспозиции:

- если Вы измените режим PROGRAM AE
- если Вы передвинете переключатель NIGHTSHOT в положение ON

Focusing manually

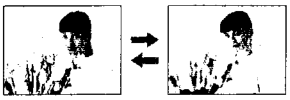
You can gain better results by manually adjusting the focus in the following cases:

- The autofocus mode is not effective when shooting
  - subjects through glass coated with water droplets
  - horizontal stripes
  - subjects with little contrast with backgrounds such as walls and sky
- When you want to change the focus from a subject in the foreground to a subject in the background
- Shooting a stationary subject when using a tripod

Фокусировка вручную

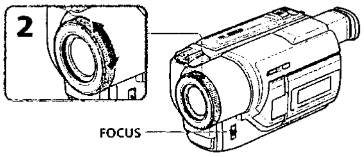
Вы можете получить лучшие результаты путем регулировки вручную в следующих случаях:

- Режим автоматической фокусировки является неэффективным при выполнении съемки
  - объектов через покрытое каплями стекло
  - горизонтальных полос
  - объектов с малой контрастностью на таком фоне, как стена или небо
- Если Вы хотите выполнить изменение фокусировки с объекта на переднем плане на объект на заднем плане
- При выполнении съемки стационарных объектов с использованием треноги



(1) Set FOCUS to MANUAL in CAMERA or MEMORY (DCR-TRV320E only) mode. The ⓕ indicator appears on the LCD screen or in the viewfinder.
(2) Turn the focus ring to sharpen focus.

(1) Установите переключатель FOCUS в положение MANUAL в режиме CAMERA или MEMORY (Только DCR-TRV320E). На экране ЖКД или в видоискателе появится индикатор ⓕ.
(2) Поверните кольцо фокусировки для получения четкой фокусировки.



To return to the autofocus mode

Set FOCUS to AUTO.

To record distant subjects

When you press FOCUS down to INFINITY. The lens focuses on infinity and ▲ indicator appears. When you release FOCUS, your camcorder returns to the manual focus mode. Use this mode when your camcorder focuses on near objects even though you are trying to shoot a distant object.

Для возвращения в режим фокусировки

Установите переключатель FOCUS в положение AUTO.

Для съемки удаленных объектов

Если Вы нажмете вниз кнопку FOCUS в положение INFINITY. Объектив выполнит фокусировку на бесконечность, и появится индикатор ▲. Если Вы отпустите кнопку FOCUS, Ваша видеокамера вернется в режим ручной фокусировки. Используйте этот режим, если Ваша видеокамера выполняет фокусировку на ближние объекты. даже если Вы пытаетесь выполнить съемку отдаленного объекта.

To focus precisely

Adjust the zoom by first focusing at the "T" (telephoto) position and then shooting at the "W" (wide-angle) position. This makes focusing easier.

When you shoot close to the subject

Focus at the end of the "W" (wide-angle) position.

ⓕ changes to the following indicators:

▲ when recording a distant subject.
● when the subject is too close to focus on.

Для точной фокусировки

Отрегулируйте объектив, сначала выполнив фокусировку в положении "T" (телефото), а затем выполнив съемку в положении "W" (широкого угла охвата). Это упростит фокусировку.

При выполнении съемки вблизи объекта

Выполните фокусировку в конце положения "W" (широкого угла охвата).

Индикация ⓕ изменится на следующие индикаторы:

▲ при записи удаленного объекта.
● если объект находится слишком близко, чтобы выполнить фокусировку на него.

Superimposing a title

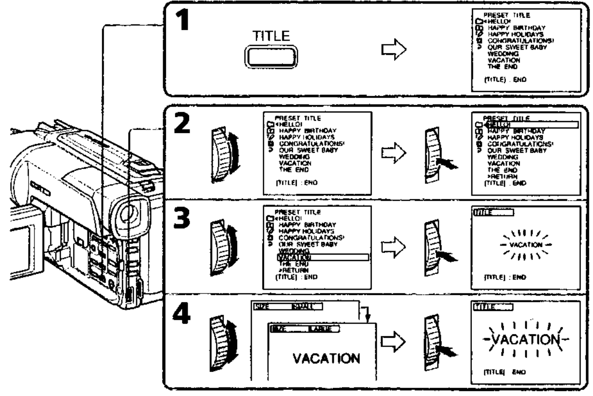
You can select one of eight preset titles and two custom titles (p. 61). You can also select the language, colour, size and position of titles.

Наложение титра

Вы можете выбрать один из восьми предварительно установленных титров и двух собственных титров (стр. 61). Вы можете также выбирать язык, цвет, размер и положение титров.

(1) Press TITLE to display the title menu in the standby mode.
(2) Turn the SEL/PUSH EXEC dial to select 🗀, then press the dial.
(3) Turn the SEL/PUSH EXEC dial to select the desired title, then press the dial. The titles are displayed in the language you selected.
(4) Change the colour, size, or position, if necessary.
  ① Turn the SEL/PUSH EXEC dial to select the colour, size, or position, then press the dial. The item appears.
  ② Turn the SEL/PUSH EXEC dial to select the desired item, then press the dial.
  ③ Repeat steps ① and ② until the title is laid out as desired.
(5) Press the SEL/PUSH EXEC dial again to complete the setting.
(6) Press START/STOP to start recording.
(7) When you want to stop recording the title, press TITLE.

(1) Нажмите кнопку TITLE для отображения меню титров в режиме ожидания.
(2) Поверните диск SEL/PUSH EXEC для выбора установки 🗀, а затем нажмите диск.
(3) Поверните диск SEL/PUSH EXEC для выбора нужного титра, а затем нажмите диск. Титры будут отображаться на выбранном Вами языке.
(4) Измените цвет, размер или положение титра, если нужно.
  ① Поверните диск SEL/PUSH EXEC для выбора цвета, размера или положения титра, а затем нажмите диск.
  ② Поверните диск SEL/PUSH EXEC для выбора нужного пункта, а затем нажмите диск.
  ③ Повторяйте пункты ① и ② до тех пор, пока титр не будет расположен так, как нужно.
(5) Нажмите диск SEL/PUSH EXEC для завершения установки.
(6) Нажмите кнопку START/STOP для начала записи.
(7) Если Вы захотите остановить запись титра, нажмите кнопку TITLE.



Superimposing a title

To superimpose the title while you are recording

Press TITLE while you are recording, and carry out steps 2 to 5. When you press the SEL/PUSH EXEC dial at step 5, the title is recorded.

To select the language of a preset title

If you want to change the language, select 🅐 before step 2. Then select the desired language and return to step 2.

If you display the menu or title menu while superimposing a title
The title is not recorded while the menu or title menu is displayed.

To use the custom title
If you want to use the custom title, select 🄲 in step 2.
If you have not made any custom title, "– – – – ..." appears on the display.

Title setting
- The title colour changes as follows :
  WHITE ←→ YELLOW ←→ VIOLET ←→ RED ←→ CYAN ←→ GREEN ←→ BLUE
- The title size changes as follows :
  SMALL ←→ LARGE
  You cannot input more than 12 characters in LARGE size.
- The title position changes as follows :
  1←→ 2←→ 3←→ 4←→ 5←→ 6←→ 7←→ 8←→ 9
  The larger the position number, the lower the title is positioned.
  When you select the title size "LARGE", you cannot choose position 9.

When you are selecting and setting the title
You cannot record the title displayed on the screen.

When you superimpose a title while you are recording
The beep does not sound.

While you are playing back
You can superimpose a title. However, the title is not recorded on tape.
You can record a title when you dub the tape connecting your camcorder to the VCR with the A/V connecting cable. If you use the i.LINK cable instead of the A/V connecting cable, you cannot record the title.

Наложение титра

Для наложения титра во время записи

Нажмите кнопку TITLE во время записи и выполните действия пунктов 2-5. Если Вы нажмете диск SEL/PUSH EXEC в пункте 5, титр будет записан.

Для выбора языка предварительно установленного титра

Если Вы хотите изменить язык, выберите индикацию 🅐 перед пунктом 2. Затем выберите нужный язык и вернитесь к пункту 2.

В случае отображения меню или меню титров во время наложения титра
Титр не будет записываться во время отображения меню или меню титров

Для использования собственного титра
Если Вы хотите использовать собственный титр, выберите установку 🄲 в пункте 2.
Если Вы не сделали никакого собственного титра, на дисплее появится индикация "– – – – ...".

Установка титра
- Цвет титра изменяется следующим образом:
  WHITE (белый) ←→ YELLOW (желтый) ←→ VIOLET (фиолетовый) ←→ RED (красный) ←→ CYAN (голубой) ←→ GREEN (зеленый) ←→ BLUE (синий)
- Размер титра изменяется следующим образом:
  SMALL (маленький) ←→ LARGE (большой)
  Вы не можете ввести более 12 символов для размера титра LARGE.
- Позиция титра изменяется следующим образом:
  1←→ 2←→ 3←→ 4←→ 5←→ 6←→ 7←→ 8←→ 9
  Чем выше номер позиции титра, тем ниже расположен титр.
  Если Вы выберите размер титра "LARGE", Вы не сможете выбрать положение 9.

При выборе и установке титра
Вы не можете записать титр, отображаемый на экране.

При наложении титра во время записи
Зуммерный сигнал не будет звучать.

Во время воспроизведения
Вы можете наложить титр. Однако титр не будет записан на ленту.
Вы можете записать титр при перезаписи ленты, подсоединив Вашу видеокамеру к КВМ с помощью соединительного аудио-/видеошнура. Если Вы используете шнур i.LINK вместо соединительного аудио-/видеошнура, Вы не сможете записать титр.

Making your own titles

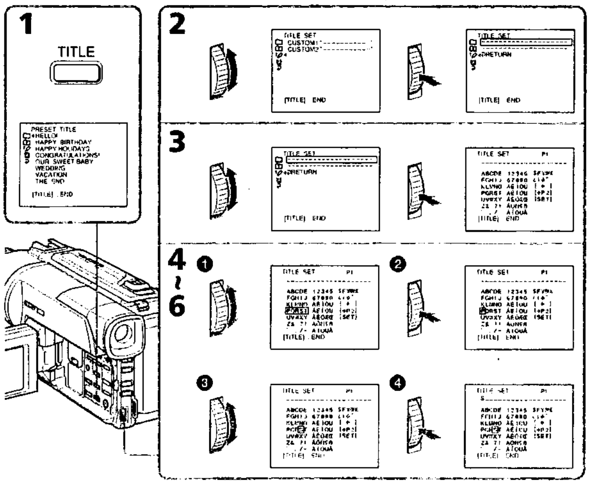
You can make up to two titles and store them in your camcorder. Each title can have up to 20 characters.

(1) Press TITLE in the standby or PLAYER mode.
(2) Turn the SEL/PUSH EXEC dial to select ✎, then press the dial.
(3) Turn the SEL/PUSH EXEC dial to select the first line (CUSTOM1) or second line (CUSTOM2), then press the dial.
(4) Turn the SEL/PUSH EXEC dial to select the column of the desired character, then press the dial.
(5) Turn the SEL/PUSH EXEC dial to select the desired character, then press the dial.
(6) Repeat steps 4 and 5 until you have selected all characters and completed the title.
(7) To finish making your own titles, turn the SEL/PUSH EXEC dial to select [SET], then press the dial. The title is stored in memory.
(8) Press TITLE to make the title menu disappear.

Создание Ваших собственных титров

Вы можете составить до двух титров и сохранить их в памяти Вашей видеокамеры. Каждый титр может содержать до 20 символов.

(1) Нажмите кнопку TITLE в режиме ожидания или режиме PLAYER.
(2) Поверните диск SEL/PUSH EXEC для выбора установки ✎, а затем нажмите диск.
(3) Поверните диск SEL/PUSH EXEC для выбора первой строки (CUSTOM1) или второй строки (CUSTOM2), а затем нажмите диск.
(4) Поверните диск SEL/PUSH EXEC для выбора колонки с нужным символом, а затем нажмите диск.
(5) Поверните диск SEL/PUSH EXEC для выбора нужного символа, а затем нажмите диск.
(6) Повторяйте пункты 4 и 5 до тех пор, пока Вы не выберите все символы и полностью не составите титр.
(7) Для завершения составления своих собственных титров поверните диск SEL/PUSH EXEC для выбора клманды [SET], а затем нажмите диск. Титр будет сохранен в памяти.
(8) Нажмите кнопку TITLE, чтобы исчезло меню титров.



Making your own titles

To change a title you have stored

In step 3, select CUSTOM1 or CUSTOM2, depending on which title you want to change, then press the SEL/PUSH EXEC dial. Turn the SEL/PUSH EXEC dial to select [←], then press the dial to delete the title. The last character is erased. Enter the new title as desired.

If you take 3 minutes or longer to enter characters in the standby mode while a cassette is in your camcorder
The power automatically goes off. The characters you have entered remain stored in memory. Set the POWER to OFF (CHARGE) once, and turn it to CAMERA again, then proceed from step 1.
We recommend setting the POWER switch to PLAYER or removing the cassette so that your camcorder does not automatically turn off while you are entering title characters.

If you select [→P2]
The menu for selecting alphabet and Russian characters appear. Select [→P1] to return to the previous screen.

To erase a character
Select [←]. The last character is erased.

To enter a space
Select [Z& ?!], then select the blank part.

Создание Ваших собственных титров

Для изменения сохраненного в памяти титра

В пункте 3 выберите установку CUSTOM1 или CUSTOM2, в зависимости от титра, который Вы хотите изменить, а затем нажмите диск SEL/PUSH EXEC. Поверните диск SEL/PUSH EXEC для выбора установки [←], а затем нажмите диск для удаления титра. Последний символ будет стерт. Введите новый нужный титр.

Если при вводе символов пройдет 3 минут или более в режиме ожидания при вставленной кассете в Вашу видеокамеру
Питание выключится автоматически. Символы, которые Вы ввели, сохранятся в памяти видеокамеры. Установите сначала переключатель POWER в положение OFF (CHARGE), а затем снова в положение CAMERA, а затем начните с пункта 1.
Рекомендуется установить переключатель POWER в положение PLAYER или вынуть кассету, чтобы Ваша видеокамера автоматически не выключалась во время ввода символов титра.

Если Вы выбрали установку [→P2]
Появится меню для выбора алфавита и русских символов. Для возврата к прежнему экрану выберите установку [→P1].

Для удаления символа
Выберите установку [←]. Последний символ будет стерт.

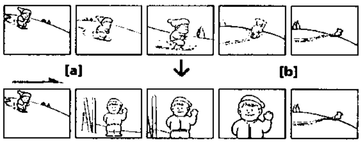
Для ввода интервала
Выберите знак [Z& ?!], а затем выберите пустую ячейку.

Inserting a scene

You can insert a scene in the middle of a recorded tape by setting the start and end points. The previously recorded frames between these start and end points will be erased. Use the Remote Commander for this operation.

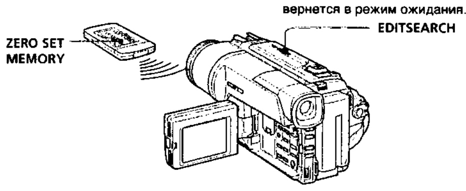
Вставка эпизода

Вы можете вставить эпизод в середине записанной ленты путем установки точек начала и окончания. Предыдущие записанные кадры между этими точками начала и окончания будут стерты. Вы можете выполнить это, используя пульт дистанционного управления.



(1) While your camcorder is in the standby mode, keep pressing EDITSEARCH, and release the button at the insert end point **[b]**.
(2) Press ZERO SET MEMORY. The ZERO SET MEMORY indicator flashes and the counter resets to zero.
(3) Keep pressing the – ⊜ side of EDITSEARCH and release the button at the insert start point **[a]**.
(4) Press START/STOP to start recording. The scene is inserted. Recording stops automatically near the counter zero point. Your camcorder returns to the standby mode.

(1) В режиме ожидания видеокамеры, держите нажатой кнопку EDITSEARH и отпустите кнопку в точке окончания эпизода **[b]**.
(2) Нажмите кнопку ZERO SET MEMORY. Начнет мигать индикатор ZERO SET MEMORY, а счетчик ленты будет установлен в нулевое положение.
(3) Держите нажатой сторону – ⊜ кнопки EDITSEARH и отпустите кнопку в точке начала эпизода **[a]**.
(4) Нажмите кнопку START/STOP для начала записи. Эпизод вставлен. Запись остановится автоматически в нулевой точке счетчика. Ваша видеокамера вернется в режим ожидания.



Notes
- The zero set memory function works only for tapes recorded in the Digital8 Ð system.
- The picture and the sound may be distorted at the end of the inserted section when it is played back.

If a tape has a blank portion in the recorded portions
The zero set memory function may not work correctly.

Примечания
- Функция памяти нуля не работает для лент, записанных в цифровой системе Digital8 Ð.
- Изображение и звук могут быть искажены в конце вставленного эпизода при воспроизведении.

Если на ленте имеется незаписанный участок
Функция памяти нуля может не работать надлежащим образом.

Playing back a tape with picture effects

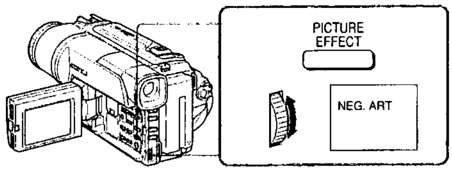
During playback, you can process a scene using the picture effect functions: NEG.ART, SEPIA, B&W and SOLARIZE.

During playback, press PICTURE EFFECT and turn the SEL/PUSH EXEC dial until the desired picture effect indicator (NEG.ART, SEPIA, B&W or SOLARIZE) appears.
For details of each picture effect function, see page 48.

Воспроизведение ленты с эффектами изображения

Во время воспроизведения, Вы можете видоизменять изображение с помощью функций: NEG.ART, SEPIA, B&W и SOLARIZE.

Во время воспроизведения, нажмите кнопку PICTURE EFFECT и поворачивайте диск SEL/PUSH EXEC до тех пор, пока не начнет мигать индикатор нужного цифрового (NEG.ART, SEPIA, B&W и SOLARIZE).
Подробные сведения по каждой функции цифровых эффектов приведены на стр. 48.



To cancel the picture effect function
Press PICTURE EFFECT.

Notes
- The picture effect function works only for tapes recorded in the Digital8 Ð system.
- You cannot process externally input scenes using the picture effect function.
- You cannot record pictures that you have processed using the picture effect function with this camcorder. To record pictures that you have processed using the picture effect function, record the pictures on the VCR using your camcorder as a player.

Pictures processed by the picture effect function
Pictures processed by the picture effect function are not output through the i DV OUT jack.

When you set the POWER switch to OFF (CHARGE) or stop playing back
The picture effect function is automatically canceled.

Для отмены функции цифровых эффектов
Нажмите кнопку PICTURE EFFECT.

Примечания
- Функция эффектов изображения работает только для лент, записанных в цифровой системе Digital8 Ð.
- Вы не можете видоизменять изображения от КВМ или телевизора с помощью функции эффектов изображения.
- Вы не можете записывать обработанные изображения с помощью функции эффектов изображения на данной видеокамере. Для записи изображения с использованием эффектов изображения, запишите изображения на КВМ, используя Вашу видеокамеру в качестве плейера.

Изображение с эффектами изображения
Сигнал изображения с эффектами изображения не передается через выходное гнездо i DV OUT.

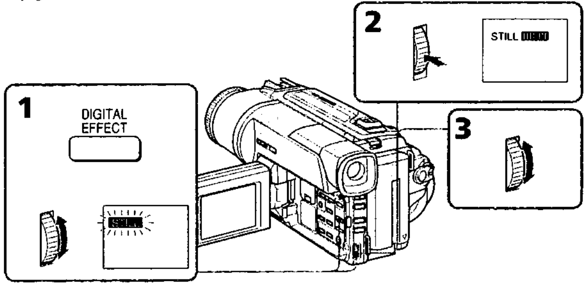
Если Вы установили переключатель POWER в положение OFF (CHARGE) или остановили воспроизведение
Функция эффектов изображения будет автоматически отменена.

Playing back a tape with digital effects

During playback, you can process a scene using the digital effect functions: STILL, FLASH, LUMI. and TRAIL.
(1) During playback, press DIGITAL EFFECT and turn the SEL/PUSH EXEC dial until the desired digital effect indicator (STILL, FLASH, LUMI. or TRAIL) flashes.
(2) Press the SEL/PUSH EXEC dial.
The digital effect indicator lights up and the bars appear. In the STILL or LUMI. mode, the picture where you press the SEL/PUSH EXEC dial is stored in memory as a still picture.
(3) Turn the SEL/PUSH EXEC dial to adjust the effect.
For details of each digital effect function, see page 50.

Воспроизведение ленты с цифровыми эффектами

Во время воспроизведения, Вы можете видоизменять изображение с помощью функций: STILL, FLASH, LUMI. и TRAIL.
(1) Во время воспроизведения, нажмите кнопку DIGITAL EFFECT и поворачивайте диск SEL/PUSH EXEC до тех пор, пока не начнет мигать индикатор нужного цифрового эффекта (STILL, FLASH, LUMI. или TRAIL).
(2) Нажмите диск SEL/PUSH EXEC.
Высветится индикатор цифрового эффекта и появятся полосы. В режиме STILL или LUMI. Изображение, на котором Вы нажмете кнопку диск SEL/PUSH EXEC, будет занесено в память как неподвижное изображение.
(3) Поверните диск SEL/PUSH EXEC для регулировки эффекта изображения.
Подробные сведения по каждой функции цифровых эффектов приведены на стр. 50.



To cancel the digital effect function
Press DIGITAL EFFECT.

Notes
- The digital effect function works only for tapes recorded in the Digital8 Ð system.
- You cannot process externally input scenes using the digital effect function.
- You cannot record pictures that you have processed using the digital effect function with this camcorder. To record pictures that you have processed using the digital effect function, record the pictures on the VCR using your camcorder as a player.

Pictures processed by the digital effect function
Pictures processed by the digital effect function are not output through the i DV OUT jack.

When you set the POWER switch to OFF (CHARGE) or stop playing back
The digital effect function is automatically canceled.

Для отмены функции цифровых эффектов
Нажмите кнопку DIGITAL EFFECT.

Примечания
- Функция цифровых эффектов работает только для лент, записанных в цифровой системе Digital8 Ð.
- Вы не можете видоизменять изображения от КВМ или телевизора с помощью функции цифровых эффектов.
- Вы не можете записывать обработанные изображения с помощью функции цифровых эффектов на данной видеокамере. Для записи изображения с цифровыми эффектами, запишите изображения на КВМ, используя Вашу видеокамеру в качестве плейера.

Изображение с цифровыми эффектами
Сигнал изображения с цифровыми эффектами не передается через выходное гнездо i DV OUT.

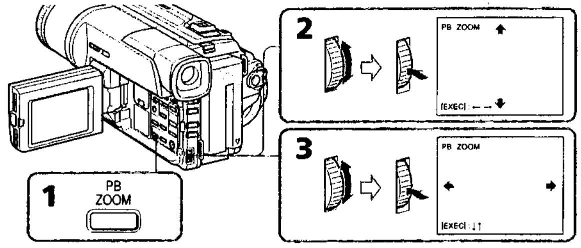
Если Вы установили переключатель POWER в положение OFF (CHARGE) или остановили воспроизведение
Функция цифровых эффектов будет автоматически отменена.

Enlarging recorded images – PB ZOOM

You can enlarge moving and still images recorded on tapes.
Besides the operation described here, your camcorder can enlarge still images recorded on "Memory Stick"s (DCR-TRV320E only).
(1) Press PB ZOOM on your camcorder while you are playing back. The image is enlarged, and ↑ ↓ appears on the LCD screen or in the viewfinder.
(2) Turn SEL/PUSH EXEC dial to move the enlarged image, then press the dial.
↑ : The image moves downwards
↓ : The image moves upwards
← → becomes available.
(3) Turn SEL/PUSH EXEC dial to move the enlarged image, then press the dial.
← : The image moves rightward (Turn the dial downwards.)
→ : The image moves leftward (Turn the dial upwards.)

Увеличение записанных изображений – PB ZOOM

Вы можете увеличивать движущиеся и неподвижные изображения, записанные на ленты.
Помимо операций, описанных в данном руководстве, Ваша видеокамера позволяет увеличивать неподвижные изображения, записанные на "Memory Stick" (Только DCR-TRV320E).
(1) Нажмите кнопку PB ZOOM на Вашей видеокамере во время воспроизведения. Изображение увеличится, а на экране ЖКД или в видоискателе появится индикация ↑ ↓.
(2) Поверните диск SEL/PUSH EXEC для перемещения увеличенного изображения, а затем нажмите диск.
↑ : Изображения перемещается вниз
↓ : Изображение перемещается вверх
← → появится на дисплее.
(3) Поверните диск SEL/PUSH EXEC для перемещения увеличенного изображения, а затем нажмите диск.
← : Изображение перемещается вправо (поверните диск вниз).
→ : Изображение перемещается влево (поверните диск вверх).



To cancel PB ZOOM function
Press PB ZOOM.

Note
- PB ZOOM works only for tapes recorded in the Digital 8 Ð system.
- You cannot process externally input scenes using PB ZOOM function.
- You cannot record pictures that you have processed using PB ZOOM function with this comcorder. To record pictures that you have processed using PB ZOOM function, record the pictures on the VCR using your camcorder as a player.

Pictures processed by PB ZOOM function
Pictures processed by PB ZOOM function are not output through the i DV OUT jack.

When you set POWER switch to OFF (CHARGE) or stop playing back
PB ZOOM function is automatically canceled.

Для отмены функции PB ZOOM
Нажмите кнопку PB ZOOM.

Примечание
- Функция PB ZOOM работает только для лент, записанных в системе Digital 8 Ð.
- Вы не можете обрабатывать введенные с внешней аппаратуры изображения с помощью функции PB ZOOM.
- Вы не можете записывать изображения, обработанные с помощью функции PB ZOOM, на данной видеокамере. Для записи изображений, обработанных с помощью функции PB ZOOM, запишите изображения на КВМ с помощью видеокамеры, используя ее в качесте плейера.

Изображения, обработанные с помощью функции PB ZOOM
Изображения, обработанные с помощью функции PB ZOOM, не передаются через гнездо i DV OUT.

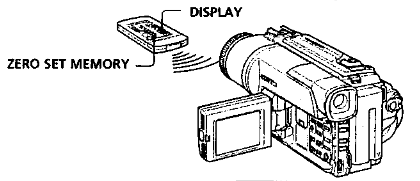
Если Вы установите переключатель POWER в положение OFF (CHARGE) или остановите воспроизведение
Функция PB ZOOM будет автоматически отмемена.

Quickly locating a scene using the zero set memory function

Your camcorder goes forward or backward to automatically stop at a desired scene having a counter value of "0:00:00".
Use the Remote Commander for this operation.
Use this function, for example, to view a desired scene later on during playback.
(1) In the playback mode, press DISPLAY.
(2) Press ZERO SET MEMORY at the point you want to locate later. The counter shows "0:00:00" and the ZERO SET MEMORY indicator flashes.
(3) Press ■ when you want to stop playback.
(4) Press ◀◀ to rewind the tape to the counter's zero point. The tape stops automatically when the counter reaches approximately zero. The ZERO SET MEMORY indicator disappears and the time code appears.
(5) Press ▶. Playback starts from the counter's zero point.

Быстрое отыскание эпизода с помощью функции памяти нулевой отметки

Ваша видеокамера выполняет продвижение вперед или назад с автоматической остановкой в нужном эпизоде, где показание счетчика равно "0:00:00".
Вы можете выполнять это с помощью пульта дистанционного управления.
Используйте эту функцию, например, для просмотра нужного эпизода позже во время воспроизведения.
(1) В режиме воспроизведения нажмите кнопку DISPLAY.
(2) Нажмите кнопку ZERO SET MEMORY в месте, которое Вы захотите найти позже. Показание счетчика станет равным "0:00:00", и начнет мигать индикатор ZERO SET MEMORY.
(3) Нажмите кнопку ■, если Вы захотите нажать остановить воспроизведение.
(4) Нажмите кнопку ◀◀ для ускоренной перемотки ленты назад к нулевой точке счетчика. Лента остановится автоматически, если счетчик достигнет нулевой отметки. Индикатор ZERO SET MEMORY исчезнет, и появится код времени.
(5) Нажмите кнопку ▶. Воспроизведение начнется с нулевой отметки счетчика.



Notes
- The zero set memory function works only for tapes recorded in the Digital8 Ð system.
- When you press ZERO SET MEMORY before rewinding the tape, the zero set memory function will be canceled.
- There may be a discrepancy of several seconds from the time code.
- The zero set memory function may not work when there is a blank portion between pictures on a tape.

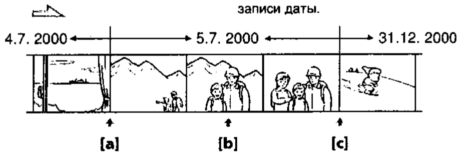
ZERO SET MEMORY functions also in the standby mode
When you insert a scene in the middle of a recorded tape, press ZERO SET MEMORY at the point you want to end the insertion. Rewind the tape to the insert start point, and start recording. Recording stops automatically at the tape counter zero point. Your camcorder returns to the standby mode.

Примечание
- Функция памяти нулевой отметки работает только для лент, записанных в цифровой системе Digital8 Ð.
- Если Вы нажмете кнопку ZERO SET MEMORY до начала обратной перемотки ленты, то функция памяти нулевой отметки будет отменена.
- Может быть расхождение в несколько секунд между кодом времени и действительным временем.
- Функция памяти нулевой отметки может не работать в случае, если имеется незаписанный участок между изображениями на ленте.

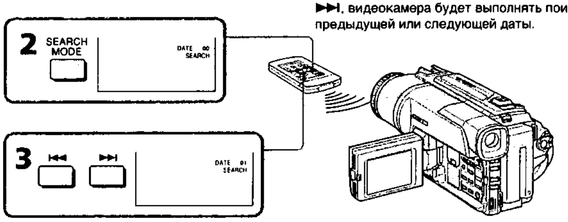
Функция ZERO SET MEMORY также работает в режиме ожидания
Если Вы хотите вставить эпизод в середине записанной ленты, нажмите кнопку ZERO SET MEMORY в том месте, где вы хотите закончить вставку. Перемотайте ленту к месту начала вставки и начните запись. Запись автоматически остановится в месте нулевой отметки счетчика ленты. Ваша видеокамера вернется в режим ожидания.

Searching a recording by date – Date search

You can automatically search for the point where the recording date changes and start playback from that point **(Date search)**. Use the Remote Commander for this operation.
Use this function to check where recording dates change or to edit the tape at each recording date.



(1) Set the POWER switch to PLAYER.
(2) Press SEARCH MODE on the Remote Commander repeatedly, until the date search indicator appears.
The indicator changes as follows:
DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
(3) When the current position is **[b]**, press ⏮ to search towards **[a]** or press ⏭ to search towards **[c]**. Your camcorder automatically starts playback at the point where the date changes.
Each time you press ⏮ or ⏭, the camcorder searches for the previous or next date.



To stop searching
Press ■.

Поиск записи по дате – Поиск даты

Вы можете выполнять автоматически поиск места, где изменяется дата записи и начинать воспроизведение с этого места **(поиск даты)**. Используйте пульт дистанционного управления для таких операций.
Используйте эту функцию для проверки, где изменяются даты записи, или же для выполнения монтажа ленты в каждом месте записи даты.

(1) Установите переключатель POWER в положение PLAYER.
(2) Нажимайте повторно кнопку SEARCH MODE на пульте дистанционного управления до тех пор, пока не появится индикатор поиска даты.
Индикатор будет изменяться следующим образом: DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
(3) Если текущее положение соответствует варианту **[b]**, нажмите кнопку ⏮ для выполнения поиска в направлении **[a]** или нажмите кнопку ⏭ для выполнения поиска в направлении **[c]**. Ваша видеокамера автоматически начнет воспроизведение в месте, где изменяется дата.
Всякий раз при нажатии кнопки ⏮ или ⏭, видеокамера будет выполнять поиск предыдущей или следующей даты.

Для остановки поиска
Нажмите кнопку ■.

Searching a recording by date – Date search

Notes
- The date search works only for tapes recorded in the Digital8 Ð system.
- If one day's recording is less than two minutes, your camcorder may not accurately find the point where the recording date changes.

If a tape has a blank portion in the recorded portions
The date search function may not work correctly.

Поиск записи по дате – Поиск даты

Примечания
- Режим поиска даты функционирует только для лент, записанных в цифровой системе Digital8 Ð.
- Если в какой-либо из дней Ваша запись продолжалась менее двух минут, Ваша видеокамера может точно не найти место, где изменяется дата записи.

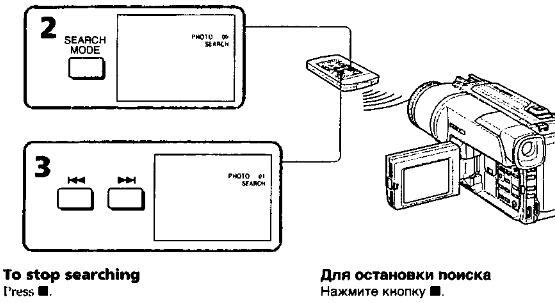
Если на записанной ленте имеются незаписанные участки
Функция поиска даты будет работать неправильно.

Searching for a photo – Photo search/Photo scan

You can search for the still image recorded on tape **(photo search)**.
You can also search for still images one after another and display each picture for five seconds automatically **(photo scan)**. Use the Remote Commander for these operations.

Searching for a photo

(1) Set the POWER switch to PLAYER.
(2) Press SEARCH MODE on the Remote Commander repeatedly, until the photo search indicator appears.
The indicator changes as follows:
DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
(3) Press ⏮ or ⏭ to select the photo for playback. Each time you press ⏮ or ⏭, the camcorder searches for the previous or next photo. Your camcorder automatically starts playback from the photo.



To stop searching
Press ■.

Поиск фото – Фотопоиск/Фотосканирование

Вы можете выполнять поиск неподвижного изображения, записанного на ленту **(фотопоиск)**.
Вы также можете выполнять поиск неподвижных изображений одно за другим и отображать каждое изображение пять секнд автоматически **(фотосканирование)**. Используйте пульт дистанционного управления для этих операций.

Поиск фото

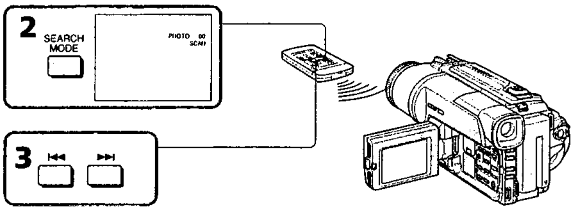
(1) Установите переключатель POWER в положение PLAYER.
(2) Нажимайте повторно на пульте дистанционного управления кнопку SEARCH MODE до тех пор, пока не появится индикатор фотопоиска.
Индикатор будет изменяться следующим образом: DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
(3) Нажмите кнопку ⏮ или ⏭, чтобы выбрать фото для воспроизведения. Всякий раз при нажатии ⏮ или ⏭ видеокамера начинает поиск предыдущего или следующего эпизода. Ваша видеокамера автоматически начнет воспроизведение с этого фото.

Для остановки поиска
Нажмите кнопку ■.

Searching for a photo – Photo search/Photo scan

Scanning photo

(1) Set the POWER switch to PLAYER.
(2) Press SEARCH MODE on the Remote Commander repeatedly, until the photo scan indicator appears.
The indicator changes as follows:
DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
(3) Press ⏮ or ⏭.
Each photo is played back for about 5 seconds automatically.



To stop scanning
Press ■.

Note
The photo search and photo scan work only for tapes recorded in the Digital8 Ð system.

If a tape has a blank portion in the recorded portions
The photo search and photo scan functions may not work correctly.

Поиск фото – Фотопоиск/Фотосканирование

Сканирование фото

(1) Установите переключатель POWER в положение PLAYER.
(2) Нажимайте повторно на пульте дистанционного управления кнопку SEARCH MODE до тех пор, пока не появится индикатор фотосканирования.
Индикатор будет изменяться следующим образом: DATE SEARCH → PHOTO SEARCH → PHOTO SCAN
(3) Нажмите кнопку ⏮ или ⏭.
Каждое фото будет автоматически отображаться примерно 5 секунд.

Для остановки сканирования
Нажмите кнопку ■.

Примечание
Фотопоиск и фотосканирование функционируют только для лент, записанных в цифровой системе Digital8 Ð.

Если на записанной ленте имеются незаписанные участки
Функция фотопоиска и фотосканирования может работать неправильно.

— Editing —

Dubbing a tape

Using the A/V connecting cable

Connect your camcorder to the VCR using the A/V connecting cable supplied with your camcorder.

(1) Insert a blank tape (or a tape you want to record over) into the VCR, and insert the recorded tape into your camcorder.

(2) Set the input selector on the VCR to LINE. Refer to the operating instructions of your VCR for more information.

(3) Set the POWER switch to PLAYER.

(4) Play back the recorded tape on your camcorder.

(5) Start recording on the VCR. Refer to the operating instructions of your VCR for more information.

— Монтаж —

Перезапись ленты

Использование соединительного кабеля аудио/видео

Подсоедините Вашу видеокамеру к КВМ с помощью соединительного кабеля аудио/видео, который прилагается к Вашей видеокамере.

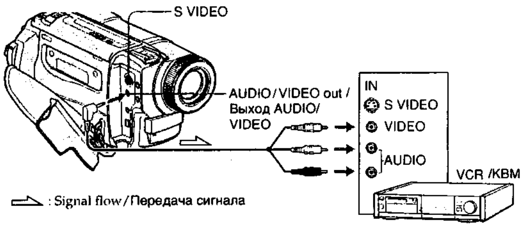
(1) Вставьте незаписанную ленту (или ленту, на которую Вы хотите выполнить запись) в КВМ и вставьте записанную ленту в Вашу видеокамеру.

(2) Установите селектор входного на КВМ в положение LINE. Более подробные сведения Вы сможете найти в инструкции по эксплуатации Вашего КВМ.

(3) Установите переключатель POWER в положение PLAYER.

(4) Начните воспроизведение записанной ленты на Вашей видеокамере.

(5) Начните запись на Вашем КВМ. Более подробные сведения Вы сможете найти в инструкции по эксплуатации Вашего КВМ.



: Signal flow/Передача сигнала

When you have finished dubbing a tape

Press ■ on both your camcorder and the VCR.

Если Вы закончили перезапись ленты

Нажмите кнопку ■ как на видеокамере, так и на КВМ.

Dubbing a tape

If you have displayed the screen indicators on the TV

Make the indicators disappear by pressing SEARCH MODE on the Remote Commander, DISPLAY or DATA CODE so that they will not be superimposed on the edited tape.

You can edit on VCRs that support the following systems:

8 mm, Hi8, VHS, S-VHS, VHSC, S-VHSC, Betamax, mini DV, DV or Digital8

If your VCR is a monaural type

Connect the yellow plug of the A/V connecting cable to the video input jack and the white or the red plug to the audio input jack on the VCR or the TV. When the white plug is connected, the left channel audio is output, and the red plug is connected, the right channel audio is output.

Connect using an S video cable (not supplied) to obtain high-quality pictures

With this connection, you do not need to connect the yellow (video) plug of the A/V connecting cable.

Connect an S video cable (not supplied) to the S video jacks of both your camcorder and the VCR.

Перезапись ленты

При отображении экранных индикаторов на экране телевизора

Добейтесь того, чтобы индикаторы исчезли, нажимая кнопку SEARCH MODE на пульте дистанционного управления, кнопку DISPLAY или DATA CODE, так чтобы они не были наложены на монтажную ленту.

Вы можете выполнять монтаж на КВМ, которые поддерживают следующие системы:

8 мм, Hi8, VHS, S-VHS, VHSC, S-VHSC, Betamax, мини DV, DV или Digital8

Если Ваш КВМ монофонического типа

Подсоедините желтый штекер соединительно кабеля аудио/видео к входному видеогнезду, а белый или красный штекер к входному аудиогнезду на КВМ или телевизоре. Если подсоединен белый штекер, то выходным сигналом будет звук левого канала, а если подсоединен красный штекер, то выходным сигналом будет звук правого канала.

Выполните подсоединение с помощью кабеля S видео (не прилагается) для получения высококачественных изображений

При таком подсоединении Вам не нужно подсоединять желтый (видео) штекер соединительного кабеля аудио/видео. Подсоедините кабель S видео (не прилагается) к гнездам S видео на Вашей видеокамере и КВМ.

Dubbing a tape

Using the i.LINK cable

Simply connect the i.LINK cable (DV connecting cable) (not supplied) to i DV OUT and to DV IN/OUT of the DV products. With digital-to-digital connection, video and audio signals are transmitted in digital form for high-quality editing. You cannot dub the screen indicators.

(1) Insert a blank tape (or a tape you want to record over) into the VCR, and insert the recorded tape into your camcorder.

(2) Set the input selector on the VCR to DV IN if it is available. Refer to the operating instructions of your VCR for more infomation.

(3) Set the POWER switch to PLAYER.

(4) Play back the recorded tape on your camcorder.

(5) Start recording on the VCR. Refer to the operating instructions of your VCR for more infomation.

Перезапись ленты

Использование кабеля i.LINK

Просто подсоедините кабель i.LINK (соединительный кабель цифрового видеосигнала DV) (не прилагается) к гнезду i DV OUT и гнезду DV IN/OUT цифровых видеоизделий. При цифро-цифровом соединении видео- и аудиосигналы передаются в цифровой форме для последующего высококачественного монтажа. Вы не можете выполнить перезапись экранных индикаторов.

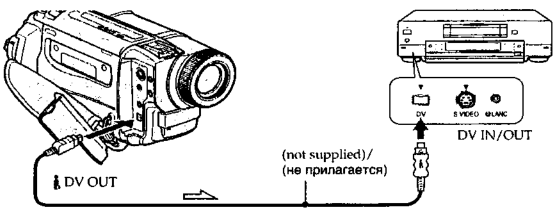
(1) Вставьте незаписанную ленту (или ленту, на которую хотите выполнить запись) в КВМ и вставьте записанную ленту в Вашу видеокамеру.

(2) Смотрите инструкцию по зесплуатации Вашего КВМ для получения дальнейшей информации.

(3) Установите переключатель POWER в положение PLAYER.

(4) Начните воспроизведение записанной ленты на Вашей видеокамере.

(5) Начните запись на КВМ. Смотрите инструкцию по зесплуатации Вашего КВМ для получения дальнейшей информации.



: Signal flow/Передача сигнала

When you have finished dubbing a tape

Press ■ on both your camcorder and the VCR.

Если Вы закончили перезапись ленты

Нажмите кнопку ■ как на Вашей видеокамере, так и на КВМ.

Dubbing a tape

Note on tapes that are not recorded in the Digital8 system

The picture may fluctuate. This is not a malfunction.

During playback of tapes recorded in the Hi8/standard 8 system

Digital signals are output as the image signals from the i DV OUT jack.

You can connect one VCR only using the i.LINK cable (DV connecting cable).

During digital editing

You cannot use PICTURE EFFECT or DIGITAL EFFECT button functions.

If you record playback pause picture via the i DV OUT jack

The recorded picture becomes rough. Also, when you play back the recorded pictures on other video equipment, the picture may jitter.

i.LINK and i are trademarks.

This "i.LINK" mark indicates that this product is in agreement with IEEE 1394-1995 specifications and their revisions.

Перезапись ленты

Примечание относительно лент, которые были записаны не в цифровой системе Digital8

Возможно подрагивание изображения. Это не является неисправностью.

Во время воспроизведения ленты, записанной в системе Hi8/стандартной системе 8

Цифровые сигналы выводятся в качестве сигналов изображения через выходное гнездо i DV OUT.

Вы можете подсоединить один только КВМ с помощью кабеля i.LINK (соединительного кабеля DV)

Во время цифрового монтажа

Вы не можете использовать функции кнопок PICTURE EFFECT или DIGITAL EFFECT.

При записи на паузе воспроизводимого изображения через гнездо i DV OUT

Записанное изображение будет искаженным. Также, при воспроизведении записанных изображений на другой аппаратуре, изображение может подрагивать.

i.LINK и i являются фирменными знаками

Знак "i.LINK" указывает на то, что данное изделие соответствует техническим условиям IEEE 1394-1995 и их дополнениям.

Changing the menu settings

To change the mode settings in the menu settings, select the menu items with the SEL/PUSH EXEC dial. The default settings can be partially changed. First, select the icon, then the menu item and then the mode.

(1) In CAMERA, PLAYER or MEMORY (DCR-TRV320E only) mode, press MENU.
(2) Turn the SEL/PUSH EXEC dial to select the desired icon, then press the dial to set.
(3) Turn the SEL/PUSH EXEC dial to select the desired item, then press the dial to set.
(4) Turn the SEL/PUSH EXEC dial to select the desired mode, and press the dial to set.
(5) If you want to change other items, select ⮐ RETURN and press the dial, then repeat steps from 2 to 4.

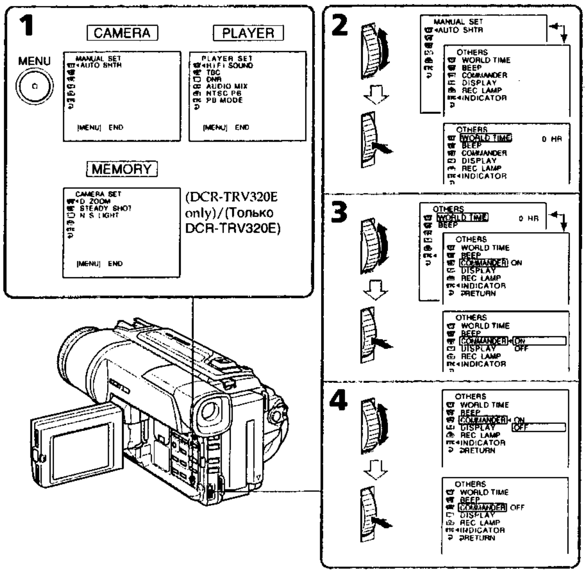
For details, see "Selecting the mode setting of each item" (p. 77).

Изменение установок меню

Для изменения установок режима в установках меню выберите пункты меню с помощью диска SEL/PUSH EXEC. Установки по умолчанию можно частично изменить. Сначала выберите пиктограмму, затем пункт меню, а затем режим.

(1) В режиме CAMERA, PLAYER или MEMORY (только DCR-TRV320E) нажмите кнопку MENU.
(2) Поверните диск SEL/PUSH EXEC для выбора нужной пиктограммы, а затем нажмите диск для выполнения установки.
(3) Поверните диск SEL/PUSH EXEC для выбора нужной пиктограммы, а затем нажмите диск для выполнения установки.
(4) Поверните диск SEL/PUSH EXEC для выбора нужной пиктограммы, а затем нажмите диск для выполнения установки.
(5) Если Вы хотите изменить другие пункты, выберите команду ⮐ RETURN, а затем нажмите диск, после чего повторите действия пунктов 2–4.

Подробные сведения приведены в разделе "Выбор установок режима по каждому пункту" (стр. 83).



Changing the menu settings

To make the menu display disappear

Press MENU.

Menu items are displayed as the following icons:

- MANUAL SET
- CAMERA SET
- PLAYER SET
- LCD/VF SET (DCR-TRV320E only)/ LCD SET (DCR-TRV120E/TRV125E)
- MEMORY SET (DCR-TRV320E only)
- TAPE SET
- SETUP MENU
- OTHERS

Изменение установок меню

Для того, чтобы исчезла индикация меню

Нажмите кнопку MENU.

Пункты меню отображаются в виде приведенных ниже пиктограмм:

- MANUAL SET
- CAMERA SET
- PLAYER SET
- LCD/VF SET (только DCR-TRV320E)/ LCD SET (DCR-TRV120E/TRV125E)
- MEMORY SET (только DCR-TRV320E)
- TAPE SET
- SETUP MENU
- OTHERS

English

Selecting the mode setting of each item

● is the default setting.

Menu items differ according to the position of the POWER switch.
The LCD screen and the viewfinder show only the items you can operate at the moment.

Icon/item	Mode	Meaning	POWER switch
AUTO SHTR	● ON	To automatically activate the electronic shutter when shooting in bright conditions	CAMERA
	OFF	To not automatically activate the electronic shutter even when shooting in bright conditions	
D ZOOM	● OFF	To deactivate digital zoom. Up to 25× zoom is carried out.	CAMERA MEMORY
	50×	To activate digital zoom. More than 25× to 50× zoom is performed digitally. (p. 24)	
	100×*	To activate digital zoom. More than 25× to 100× zoom is performed digitally. (p. 24)	
16:9WIDE	● OFF	—	CAMERA
	ON	To record a 16:9 wide picture (p. 45)	
STEADYSHOT	● ON	To compensate for camera-shake	CAMERA MEMORY
	OFF	To cancel the SteadyShot function. Natural pictures are produced when shooting a stationary object with a tripod.	
N.S. LIGHT	● ON	To use the NightShot Light function (p. 28)	CAMERA MEMORY
	OFF	To cancel the NightShot Light function	

* 125× (DCR-TRV125E only)

Notes on the SteadyShot function

- The SteadyShot function will not correct excessive camera-shake.
- Attachment of a conversion lens (not supplied) may influence the SteadyShot function.

If you cancel the SteadyShot function

The SteadyShot off indicator appears. Your camcorder prevents excessive compensation for camera-shake.

Changing the menu settings

Icon/item	Mode	Meaning	POWER switch
HiFi SOUND	● STEREO	To play back a stereo tape or dual sound track tape with main and sub sound	PLAYER
	1	To play back dual sound track tape with main sound	
	2	To play back a dual sound track tape with sub sound	
TBC*	● ON	To correct jitter	PLAYER
	OFF	To not correct jitter. Set TBC to OFF when playing back a tape on which you have dubbed over and recorded the signal of a TV game or similar machine.	
TBC stands for "Time Base Corrector".			
DNR*	● ON	To reduce picture noise	PLAYER
	OFF	To reduce a conspicuous afterimage when the picture has a lot of movement	
DNR stands for "Digital Noise Reduction".			
AUDIO MIX		To adjust the balance between the stereo 1 and stereo 2 ST1 ▲ ST2	PLAYER
NTSC PB	● ON PAL TV	To playback a tape recorded on your camcorder on a PAL system TV	PLAYER
	NTSC 4.43	To playback a tape recorded in the NTSC colour system on a TV with the NTSC 4.43 mode	
PB MODE	● AUTO	To automatically select the system (Hi8/standard 8 or Digital8) that was used to record on the tape, and play back the tape	PLAYER
	Hi8/8	To play back a tape that was recorded in the Hi8/standard 8 system when your camcorder does not automatically distinguish the recording system	

* When you play back tapes recorded in the Hi8/standard 8 system only.

Notes on AUDIO MIX

- When playing back a tape recorded in the 16-bit mode, you cannot adjust the balance.
- You can adjust the balance only for tapes recorded in the Digital8 system.

Note on NTSC PB

When you play back a tape on a Multi System TV, select the best mode while viewing the picture on the TV.

Note on PB MODE

The mode will return to the default setting when:
– you remove the battery pack or power source.
– you turn the POWER switch.

Changing the menu settings

Icon/item	Mode	Meaning	POWER switch
LCD B. L.	● BRT NORMAL	To set the brightness on the LCD screen normal	PLAYER CAMERA MEMORY
	BRIGHT	To brighten the LCD screen	
LCD COLOUR		To adjust the colour on the LCD screen To lighten ◀—▲—▶ To darken	PLAYER CAMERA MEMORY
VF B.L.*	● BRT NORMAL	To set the brightness in the viewfinder normal	PLAYER CAMERA MEMORY
	BRIGHT	To brighten the viewfinder	
CONTINUOUS*	● OFF	Not to record continuously	MEMORY
	MULTI SCRN	To record 9 images continuously (p. 97)	
QUALITY*	● FINE	To record still images in the fine image quality mode, using the "Memory Stick"	PLAYER MEMORY
	STANDARD	To record still images in the standard image quality mode, using the "Memory Stick"	
FLD./FRAME*	● FIELD	To record moving subjects	MEMORY
	FRAME	To record stopping subjects in high quality	
PRINT MARK*	● OFF	Not to write print marks on still pictures	PLAYER MEMORY
	ON	To write a print mark on the recorded still images you want to print out later	
PROTECT*	● OFF	Not to protect still images	PLAYER MEMORY
	ON	To protect selected still iamges against accidental erasure (p. 116)	
SLIDE SHOW*		To play back images in a continuous loop (p. 114)	MEMORY
DELETE ALL*		To delete all the images (p. 119)	PLAYER MEMORY
FORMAT*	● RETURN	To cancel formatting.	PLAYER MEMORY
	FORMAT	To format an inserted "Memory Stick." 1. Select FORMAT with the SEL/PUSH EXEC dial, then press the dial. 2. Turn the SEL/PUSH EXEC dial to select FORMAT, then press the dial. 3. After "EXECUTE" appears, press the SEL/PUSH EXEC dial. "FORMATTING" appears during formatting. "COMPLETE" appears when formatting is finished.	
PHOTO SAVE*		To duplicate still images (p. 107)	PLAYER

* DCR-TRV320E only

Notes on LCD B.L. and VF.B.L.

- When you select "BRIGHT", battery life is reduced by about 10 percent during recording.
- When you use power sources other than the battery pack, "BRIGHT" is automatically selected.

Notes on formatting

- Supplied or optional "Memory Stick"s have been formatted at factory. Formatting with this camcorder is not required.
- Do not turn the POWER switch or press any button while the display shows "FORMATTING."
- You cannot format the "Memory Stick" if the write-protect tab on the "Memory Stick" is set to LOCK.
- Format again if the message "⊠" appears.

Formatting erases all information on the "Memory Stick"

Check the contents of the "Memory Stick" before formatting:

- Formatting erases sample images on the "Memory Stick"
- Formatting erases the protected image data on the "Memory Stick."

Changing the menu settings

Icon/item	Mode	Meaning	POWER switch
REC MODE	● SP	To record in the SP (Standard Play) mode	PLAYER CAMERA
	LP	To increase the recording time to 1.5 times the SP mode	
AUDIO MODE	● 12BIT	To record or play back in the 12-bit mode (two stereo sounds)	PLAYER* CAMERA
	16BIT	To record or play back in the 16-bit mode (the one stereo sound with high quality)	
REMAIN	● AUTO	To display the remaining tape bar: • for about 8 seconds after your camcorder is turned on and calculates the remaining amount of tape • for about 8 seconds after a cassette is inserted and your camcorder calculates the remaining amount of tape • for about 8 seconds after ► is pressed in PLAYER mode • for about 8 seconds after DISPLAY is pressed to display the screen indicators • for the period of tape rewinding, forwarding or picture search in the PLAYER mode	PLAYER CAMERA
	ON	To always display the remaining tape bar	
DATA CODE	● DATE/CAM	To display date, time and recording data during playback	PLAYER
	DATE	To display date and time during playback	

Note on REC MODE

When you record on the standard 8 8 tape, your camcorder records in the SP mode even you select the LP mode in the menu settings. In this case, the indicator "8 mm TAPE → SP REC, Hi8 TAPE → LP/SP REC" appears on the LCD screen or in the viewfinder. Use the Hi8 **Hi**8 tapes for the LP mode.

Notes on the LP mode

- When you record a tape in the LP mode on your camcorder, we recommend playing the tape on your camcorder. When you play back the tape on other camcorders or VCRs, noise may occur in images or sound.
- When you record in the SP and LP modes on one tape or you record some scenes in the LP mode, the playback image may be distorted or the time code may not be written properly between scenes.

Note on AUDIO MODE

When playing back a tape recorded in the 16-bit mode, you cannot adjust the balance in AUDIO MIX.

***To dub a tape to another VCR**

You cannot select AUDIO MODE for tapes recorded in the Digital8 D system. You, however, can select AUDIO MODE when you dub tapes recorded in the Hi8/standard 8 system to another VCR using the i.LINK cable.

Changing the menu settings

Icon/item	Mode	Meaning	POWER switch
CLOCK SET		To reset the date or time (p. 89)	CAMERA MEMORY
LTR SIZE	● NORMAL	To display selected menu items in normal size	PLAYER CAMERA MEMORY
	2×	To display selected menu items at twice the normal size	
DEMO MODE	● ON	To make the demonstration appear	CAMERA
	OFF	To cancel the demonstration mode	

Notes on DEMO MODE

- You cannot select DEMO MODE when a cassette is inserted in your camcorder.
- DEMO MODE is set to STBY (Standby) at the factory and the demonstration starts about 10 minutes after you have set the POWER switch to CAMERA without a cassette inserted.
  To cancel the demonstration, insert a cassette, set the POWER switch to other than CAMERA, or set DEMO MODE to OFF.
- When NIGHTSHOT is set to ON, the "NIGHTSHOT" indicator appears on the LCD screen or in the viewfinder and you cannot select DEMO MODE in the menu settings.

Changing the menu settings

Icon/item	Mode	Meaning	POWER switch
WORLD TIME		To set the clock to the local time. Turn the SEL/PUSH EXEC dial to set a time difference. The clock changes by the time difference you set here. If you set the time difference to 0, the clock returns to the originally set time.	CAMERA MEMORY
BEEP	● MELODY	To output the melody when you start/stop recording or when an unusual condition occurs on your camcorder	PLAYER CAMERA MEMORY
	NORMAL	To output the beep instead of the melody	
	OFF	To cancel the melody and beep sound	
COMMANDER	● ON	To activate the Remote Commander supplied with your camcorder	PLAYER CAMERA MEMORY
	OFF	To deactivate the Remote Commander to avoid remote control misoperation caused by other VCR's remote control	
DISPLAY	● LCD	To show the display on the LCD screen and in the viewfinder	PLAYER CAMERA MEMORY
	V-OUT/LCD	To show the display on the TV screen, LCD screen and in the viewfinder	
REC LAMP	● ON	To light up the camera recording lamp at the front of your camcorder	CAMERA MEMORY
	OFF	To turn the camera recording lamp off so that the subject is not aware of the recording	
INDICATOR	● BL OFF	To turn off the backlight on display window	PLAYER CAMERA MEMORY
	BL ON	To turn on the backlight	

Note

If you press DISPLAY with DISPLAY set to V-OUT/LCD in the menu settings, the picture from a TV or VCR will not appear on the LCD screen even when your camcorder is connected to outputs on the TV or VCR. (Except when your camcorder is connected with the i.LINK cable.)

In more than 5 minutes after removing the power source

The AUDIO MIX, COMMANDER and HiFi SOUND items are returned to their default settings.
The other menu items are held in memory even when the battery is removed, as long as the lithium battery is installed.

Notes on INDICATOR

- When you select BL ON, battery life is reduced by about 10 percent during recording.
- When you use power sources other than the battery pack, BL ON is automatically selected.

Resetting the date and time

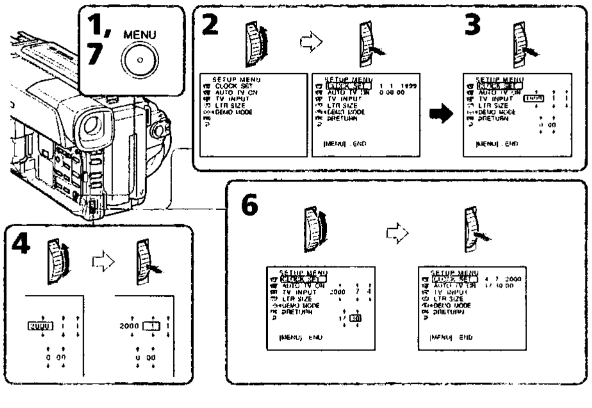
The default clock setting is set to London time for United Kingdom and to Paris time for the other European countries Time.
The date and time are held in memory by the lithium battery. If you replace the lithium battery with the battery pack or other power source connected, you need not reset the date and time.
You must reset the date and time when the lithium battery becomes dead with no power source installed.
First, set the year, then the month, the day, the hour and then the minute.

(1) While the camcorder is in the standby mode, press MENU to display the menu settings.
(2) Turn the SEL/PUSH EXEC dial to select , then press the dial.
(3) Turn the SEL/PUSH EXEC dial to select CLOCK SET, then press the dial.
(4) Turn the SEL/PUSH EXEC dial to adjust the desired year, then press the dial.
(5) Set the month, day and hour by turning the SEL/PUSH EXEC dial and pressing the dial.
(6) Set the minute by turning the SEL/PUSH EXEC dial and pressing the dial by the time signal. The clock starts to move.
(7) Press MENU to make the menu settings disappear.

Переустановка даты и времени

Установка часов по умолчанию соответствует времени Лондона для моделей Соединенного Королевства и времени Парижа для других европейских моделей.
Дата и время сохраняются в памяти с помощью литиевой батарейки. Если Вы от литиевой батарейки переключитесь на батарейный блок или другой подсоединенный источник питания, Вам нужно будет переустановить дату и время. Вам нужно также переустановить дату и время, когда литиевая батарейка разрядится и в это время не будет вставлен источник питания.
Сначала установите год, затем месяц, день, час и минуту.

(1) В режиме ожидания видеокамеры нажмите кнопку MENU для отображения установок меню.
(2) Поверните диск SEL/PUSH EXEC для выбора индикации , а затем нажмите диск.
(3) Поверните диск SEL/PUSH EXEC для выбора команды CLOCK SET, а затем нажмите диск.
(4) Поверните диск SEL/PUSH EXEC для выбора нужного года, а затем нажмите диск.
(5) Установите месяц, день и час путем вращения диска SEL/PUSH EXEC и нажимания диска.
(6) Установите минуту путем вращения диска SEL/PUSH EXEC и нажимания диска в момент передачи сигнала точного времени. Часы начнут функционировать.
(7) Нажмите кнопку MENU для того, чтобы исчезли установки меню.



Resetting the date and time

The year changes as follows:

1999 ↔ 2000 ← · · · · → 2029 (2029 → 1999)

If you do not set the date and time
"– –:– –:– –" is recorded on the tape and the "Memory Stick" (DCR-TRV320E only).

Note on the time indicator
The internal clock of your camcorder operates on a 24-hour cycle.

Переустановка даты и времени

Год изменяется следующим образом:

Если Вы не установили дату и время
На ленту и "Memory Stick" будет записываться индикация "– –:– –:– –" (Только DCR-TRV320E).

Примечание по индикатору времени
Встроенные часы Вашей видеокамеры работают в 24-часовом режиме.

Digital8 [) system, recording and playback

What is the "Digital8 [) system"?
This video system has been developed to enable digital recording to Hi8 Hi[8]/Digital8 [) video cassette .

Usable cassette tapes
We recommend using Hi8 Hi[8]/Digital8 [) video cassette.*
The recording time when you use your Digital8 [) system camcorder on Hi8 Hi[8]/standard 8 [8] tape is half the recording time when using the conventional Hi8 Hi[8]/standard 8 [8] system camcorder. (120 minutes of recording time becomes 60 minutes in the SP mode.)

* If you use standard 8 [8] tape, be sure to play back the tape on this camcorder. Mosaic pattern noise may appear when you play back standard 8 [8] tape on other VCRs (including other DCR-TRV120E/TRV125E/TRV320E).

Note
Tapes recorded in the Digital8 [) system cannot be played back on Hi8 Hi[8]/standard 8 [8] (analog) system machine.

[8] is a trademark.
Hi[8] is a trademark.
[) is a trademark.

Playback system

The Digital8 [) system or Hi8 Hi[8]/standard 8 [8] system is automatically detected before the tape is played back.
During playback of tapes recorded in the Hi8 Hi[8]/standard 8 [8] system, digital signals are output as the image signals from the i DV OUT jack.

Display during automatic detection of system
The Digital8 [) system or Hi8 Hi[8]/standard 8 [8] system is automatically detected, and the playback system is automatically switched to. During switching of systems, the screen turns blue, and the following displays appear. A hissing noise also sometimes can be heard.

[) → Hi[8]/[8]: During switching from Digital8 [) to Hi8 Hi[8]/standard 8 [8]
Hi[8]/[8] → [): During switching from Hi8 Hi[8]/standard 8 [8] to Digital8 [)

Цифровая система Digital8 [), запись и воспроизведение

Что такое "Цифровая система Digital8 [)"?
Эта видеосистема была разработана для обеспечения цифровой записи на видеокассеты Hi8 Hi[8]/Digital8 [).

Используемые кассеты
Рекомендуется использовать видеокассеты Hi8 Hi[8]/Digital8 [).*
Время записи при использовании Вашей видеокамеры системы Digital8 [) на ленте Hi8 Hi[8]/стандартной ленте 8 [8] в два раз меньше, чем при использовании обычной видеокамеры Hi8 Hi[8]/видеокамеры стандартной системы 8 [8]. (120 минут времени записи станут равными 60 минутам в режиме SP).

* При использовании стандартной ленты 8 [8], ее следует воспроизводить на этой же видеокамере. При воспроизведении стандартной ленты 8 [8] на других КВМ (включая другие аппараты DCR-TRV120E/TRV125E/TRV320E) могут появится помехи типа мозаики.

Примечание
Ленты, записанные в цифровой системе Digital8 [), не могут быть воспроизведены на аппаратуре системы Hi8 Hi[8]/стандартной системы 8 [8] (аналоговой).

[8] является фирменным знаком.
Hi[8] является фирменным знаком.
[) является фирменным знаком.

Система воспроизведения

Цифровая система Digital8 [) или Hi8 Hi[8]/стандартная система 8 [8] автоматически детектируется перед воспроизведением ленты. Во время воспроизведения лент, записанных в системе Hi8 Hi[8]/стандартной системы 8 [8], цифровые сигналы выводятся в качестве сигналов изображения через выходное гнездо i DV OUT.

Индикация во время автоматического детектирования системы
СЦифровая система Digital8 [) или Hi8 Hi[8]/стандартная система 8 [8] автоматически детектируется, а система воспроизведения автоматически включается. Во время выключения систем, экран становится голубым и появляются следующие индикации. Может быть также слышен свистящий шум.

[) → Hi[8]/[8]: Во время переключения с системы Digital8 [) на систему Hi8 Hi[8]/стандартную систему 8 [8]
Hi[8]/[8] → [): Во время переключения с системы Hi8 Hi[8]/стандартной системы 8 [8] на цифровую систему Digital8 [)

Digital8 [) system, recording and playback

When you play back

Playing back an NTSC-recorded tape
You can play back tapes recorded in the NTSC video system on the LCD screen, if the tape is recorded in the SP mode.

When you playback a dual sound track tape

When you use tapes recorded in the Digital8 [) system

When you play back a Digital8 [) system tape which is dubbed from a dual sound track tape recorded in the DV system, set HiFi SOUND to the desired mode in the menu settings (p. 76).

Sound from speaker

HiFi Sound Mode	Playing back a stereo tape	Playing back a dual sound track tape
STEREO	Stereo	Main sound and sub sound
1	Lch	Main sound
2	Rch	Sub sound

When you use a tape recorded in the Hi8/standard 8 system

When you play back a dual sound track tape recorded in an AFM HiFi stereo system, set HiFi SOUND to the desired mode in the menu settings (p. 76).

Sound from speaker

HiFi Sound Mode	Playing back a stereo tape	Playing back a dual sound track tape
STEREO	Stereo	Main sound and sub sound
1	Monaural	Main sound
2	Unnatural Sound	Sub sound

You cannot record dual sound programmes on your camcorder.

Цифровая система Digital8 [), запись и воспроизведение

При воспроизведении

Воспроизведение лент, записанных в системе NTSC
Вы можете воспроизводить ленты, записанные в видеосистеме NTSC, на экране ЖКД, если лента записана в режиме SP.

При воспроизведении ленты с двойной звуковой дорожкой

При использовании лент, записанных в цифровой системе Digital8 [)

При воспроизведении ленты в цифровой системе Digital8 [), на которую выполнена перезапись ленты с двойной звуковой дорожкой, записанной в цифровой видеосистеме DV, установите команду HiFi SOUND в нужный режим в установках меню (стр. 76).

Звук от динамика

Режим звучания HiFi	Воспроизведение стереофонической ленты	Воспроизведение ленты с двойной звуковой дорожкой
STEREO	Стереофонический звук	Основной звук и вспомогательный звук
1	Левый канал	Основной звук
2	Правый канал	Вспомогательный звук

При использовании лент, записанных в системе Hi8/стандартной системе 8

При воспроизведении ленты с двойной звуковой дорожкой, записанной в стереофонической системе AFM HiFi, установите команду HiFi SOUND в нужный режим в установках меню (стр. 76).

Звук от динамика

Режим звучания HiFi	Воспроизведение стереофонической ленты	Воспроизведение ленты с двойной звуковой дорожкой
STEREO	Стереофонический звук	Основной звук и вспомогательный звук
1	Монофонический звук	Основной звук
2	Необычный звук	Вспомогательный звук

Вы не можете записывать программы с двойным звучанием на Вашей видеокамере.

Changing the lithium battery in your camcorder

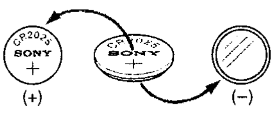
When replacing the lithium battery, keep the battery pack or other power source attached. Otherwise, you will need to reset the date, time and other items in the menu settings hold in memory by the lithium battery.

Insert the battery with the positive (+) side facing out. When the battery becomes weak or dead, the ⌚ indicator flashes on the LCD screen or in the viewfinder for about 5 seconds when you set the POWER switch to CAMERA. In this case, **replace the battery with a Sony CR2025 lithium battery. Use of any other battery may present a risk of fire or explosion.** Discard used batteries according to the manufacturer's instructions.

Замена литиевой батарейки в Вашей видеокамере

При замене литиевой батарейки батарейный блок или другой источник питания должен быть прикреплен к видеокамере. В противном случае Вам понадобится переустанавливать дату, время и другие пункты в установках меню, хранимых в памяти видеокамеры с помощью литиевой батарейки.

Вставьте батарейку так, чтобы положительный (+) полюс был обращен наружу. Если батарейка станет слабой или разрядится, индикатор ⌚ будет мигать на экране ЖКД или в видоискателе около 5 секунд, если переключатель POWER установлен в положение CAMERA. В этом случае, **замените батарейку на литиевую батарейку Sony CR2025. Использование другой батарейки может привести к пожару или взрыву.** Ликвидируйте использованные батарейки в соответствии с инструкциями предприятия-изготовителя.



WARNING
The battery may explode if mistreated. Do not recharge, disassemble, nor dispose of it in fire.

Lithium battery
- Keep the lithium battery out of the reach of children.
- Should the battery be swallowed, immediately consult a doctor.
- Wipe the battery with a dry cloth to ensure good contact.

Lithium battery installed at the factory
This battery may not last 1 year.

ВНИМАНИЕ
Если с батарейкой неправильно обращаться, она может взорваться. Не перезаряжайте, не разбирайте и не бросайте в огонь батарейку.

Литиевая батарейка
- Храните литиевую батарейку в месте, не доступном для детей.
- В случае, если кто-либо случайно проглотит батарейку, следует немедленно обратиться к врачу.
- Протрите батарейку сухой тканью для обеспечения хорошего контакта.

Литиевая батарейка, установленная на заводе
Этой батарейки может не хватить на 1 год.

Changing the lithium battery in your camcorder

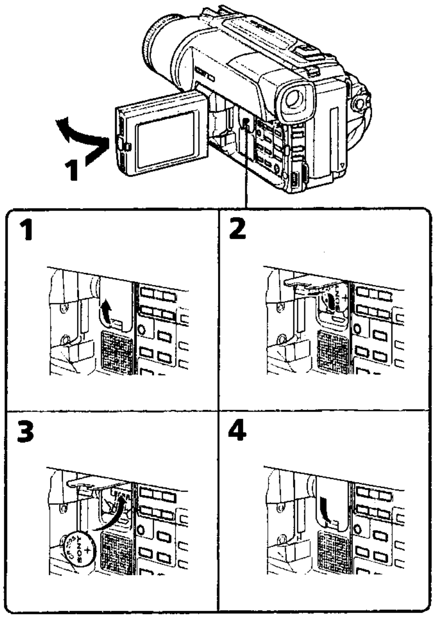
Changing the lithium battery

(1) Open the LCD panel and open the lid of the lithium battery compartment.
(2) Push the lithium battery up once and pull it out from the holder.
(3) Install a Sony CR2025 lithium battery with the positive (+) side facing out.
(4) Close the lid.

Замена литиевой батарейки в Вашей видеокамере

Замена литиевой батарейки

(1) Откройте панель ЖКД и откройте крышку отсека для литиевой батарейки.
(2) Нажмите литиевую батарейку вверх один раз и выньте ее из держателя.
(3) Установите литиевую батарейку Sony CR2025 так, чтобы положительный (+) полюс был обращен наружу.
(4) Закройте крышку.



English

Troubleshooting

If you run into any problem using your camcorder, use the following table to troubleshoot the problem. If the problem persists, disconnect the power source and contact your Sony dealer or local authorized Sony service facility. If "C:□□:□□" appears on the LCD screen or in the viewfinder, the self-diagnosis display function has worked. See page 132.

In the recording mode

Symptom	Cause and/or Corrective Actions
START/STOP does not operate.	• The POWER switch is set to OFF (CHARGE) or PLAYER. → Set it to CAMERA. (p. 21) • The tape has run out. → Rewind the tape or insert a new one. (p. 19, 33) • The write-protect tab is set to expose the red mark. → Use a new tape or slide the tab. (p. 20) • The tape is stuck to the drum (moisture condensation). → Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 144)
The power goes off.	• While being operated in the CAMERA mode, your camcorder has been in the standby mode for more than 3 minutes. → Set the POWER switch to OFF (CHARGE) and then to CAMERA again. (p. 21)
The image on the viewfinder screen is not clear.	• The viewfinder lens is not adjusted. → Adjust the viewfinder lens. (p. 25)
The SteadyShot function does not work.	• STEADYSHOT is set to OFF in the menu settings. → Set it to ON. (p. 76)
The autofocusing function does not work.	• FOCUS is set to MANUAL. → Set it to AUTO. (p. 57) • Shooting conditions are not suitable for autofocus. → Set FOCUS to MANUAL to focus manually. (p. 57)
The fader function does not work.	• The digital effect function is working. → Cancel it. (p. 52)
The picture does not appear in the viewfinder.	• The LCD panel is open. → Close the LCD panel. (p. 23)
You cannot record in the LP mode.	• The tape is the standard 8 tape. → Use Hi8 **Hi8**/Digital8 **D** tapes.

(Continued on the following page)

Symptom	Cause and/or Corrective Actions
A vertical band appears when you shoot a subject such as lights or a candle flame against a dark background.	• The contrast between the subject and background is too high. This is not a malfunction.
A vertical band appears when you shoot a very bright subject.	• This is not a malfunction.
Some tiny white spots appear on the LCD screen or in the viewfinder.	• Slow shutter, low lux or Super NightShot mode is activated. This is not a malfunction.
An unknown picture is displayed on the LCD screen or in the viewfinder.	• If 10 minutes elapse after you set the POWER switch to CAMERA or DEMO MODE is set to ON in the menu settings without a cassette inserted, your camcorder automatically starts the demonstration. → Insert a cassette and the demonstration stops. You can also cancel DEMO MODE. (p. 81)
The picture is recorded in incorrect or unnatural colours.	• NIGHTSHOT is set to ON. → Set it to OFF. (p. 28)
Picture appears too bright, and the subject does not appear on the LCD screen or in the viewfinder.	• NIGHTSHOT is set to ON in a bright place. → Set it to OFF, or use the NightShot function in a dark place. (p. 28)
A horizontal black band appears when shooting a TV screen or computer screen.	• Set STEADYSHOT to OFF in the menu settings (p. 76)

In the playback mode

Symptom	Cause and/or Corrective Actions
The tape does not move when a video control button is pressed.	• The POWER switch is set to CAMERA, OFF (CHARGE) or MEMORY (DCR-TRV320E only). → Set it to PLAYER. (p. 33)
The playback button does not work.	• The tape has run out. → Rewind the tape. (p. 33)
There are horizontal lines on the picture or the playback picture is not clear or does not appear.	• The video head may be dirty. → Clean the heads using the Sony V8-25CLD cleaning cassette (not supplied). (p. 145)
No sound or only a low sound is heard when playing back a tape.	• The stereo tape is played back with HiFi SOUND set to 2 in the menu settings. → Set it to STEREO. (p. 76) • The volume is turned to minimum. → Open the LCD panel and press VOLUME +. (p. 33) • AUDIO MIX is set to ST2 side in the menu settings. → Adjust AUDIO MIX. (p. 76)
The date search does not work correctly.	• The tape has a blank portion in the recorded portion (p. 68)
The picture which is recorded in the Digital8 **D** system is not played back.	• PB MODE is set to **Hi8/8** in the menu settings. → Set it to AUTO. (p. 76)
The tape which is recorded in the Hi8/standard 8 system is not played back correctly.	• Set PB MODE to **Hi8/8** in the menu settings. (p. 76)

In the recording and playback modes

Symptom	Cause and/or Corrective Actions
The power does not turn on.	• The battery pack is not installed, or is dead or nearly dead. → Install a charged battery pack. (p. 12, 13) • The AC power adaptor is not connected to the mains. → Connect the AC power adaptor to the mains. (p. 18)
The end search function does not work.	• The tape was ejected after recording. • You have not recorded on the new cassette yet.
The end search function does not work correctly.	• The tape has a blank portion in the beginning or middle.
The battery pack is quickly discharged.	• The operating temperature is too low. • The battery pack is not fully charged. → Charge the battery pack fully again. (p. 13) • The battery pack is completely dead, and cannot be recharged. → Replace with a new battery pack. (p. 12)
The battery remaining indicator does not indicate the correct time.	• You have used the battery pack in an extremely hot or cold environment for a long time. • The battery pack is completely dead, and cannot be recharged. → Replace with a new battery pack. (p. 12) • The battery is dead. → Use a charged battery pack. (p. 12, 13)
The power goes off although the battery remaining indicator indicates that the battery pack has enough power to operate.	• Charge the battery pack fully again so that the indication on the battery remaining indicator is correct.
The cassette cannot be removed from the holder.	• The power source is disconnected. → Connect it firmly. (p. 13, 18) • The battery is dead. → Use a charged battery pack. (p. 12, 13)
The ▣ and ⏏ indicators flash and no functions except for cassette ejection work.	• Moisture condensation has occurred. → Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 144)

(Continued on the following page)

When operating using the "Memory Stick" – DCR-TRV320E only

Symptom	Cause and/or Corrective Actions
The "Memory Stick" does not function.	• The POWER switch is set to CAMERA or OFF (CHARGE). → Set it to MEMORY. (p. 94) • "Memory Stick" is not inserted. → Insert a "Memory Stick". (p. 93)
Recording does not function.	• The "Memory Stick" has already been recorded to its full capacity. → Erase unnecessary images and record again. (p. 118, 96) • Unformatted "Memory Stick" is inserted. → Format the "Memory Stick". (p. 79) • The write-protect tab on the "Memory Stick" is set to LOCK. → Release the lock. (p. 91)
The image cannot be deleted.	• The image is protected. → Cancel image protection. (p. 116) • The write-protect tab on the "Memory Stick" is set to LOCK. → Release the lock. (p. 91)
You cannot format the "Memory Stick".	• The write-protect tab on the "Memory Stick" is set to LOCK. → Release the lock. (p. 91)
Deleting all the images cannot be carried out.	• The write-protect tab on the "Memory Stick" is set to LOCK. → Release the lock. (p. 91)
You cannot protect the image.	• The write-protect tab on the "Memory Stick" is set to LOCK. → Release the lock. (p. 91) • The image to protect is not played back. → Press MEMORY PLAY to play back the image. (p. 109)
You cannot write a print mark on the still image.	• The write-protect tab on the "Memory Stick" is set to LOCK. → Release the lock. (p. 91) • The image to write a print mark is not played back. → Press MEMORY PLAY to play back the image. (p. 109)
The photo save function does not work.	• The write-protect tab on the "Memory Stick" is set to LOCK. → Release the lock. (p. 91)

Others

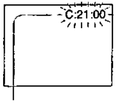
Symptom	Cause and/or Corrective Actions
The Remote Commander supplied with your camcorder does not work.	• COMMANDER is set to OFF in the menu settings. → Set it to ON. (p. 76) • Something is blocking the infrared rays. → Remove the obstacle. • The batteries are inserted in the battery holder with the + – polarities incorrectly matching the + – marks. → Insert the batteries with the correct polarity. (p. 158) • The batteries are dead. → Insert new ones. (p. 158)
The melody or beep sounds for 5 seconds.	• Moisture condensation has occurred. → Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 144) • Some troubles has occurred in your camcorder. → Remove the cassette and insert it again, then operate your camcorder.
While charging the battery pack, no indicator appears or the indicator flashes in the display window.	• The AC power adaptor is disconnected. → Connect it firmly. (p. 18) • Something is wrong with the battery pack. → Contact your Sony dealer or local authorized Sony service facility.

English

Self-diagnosis display

Your camcorder has a self-diagnosis display function. This function displays the current condition of your camcorder as a 5-digit code (a combination of a letter and figures) on the LCD screen, in the viewfinder or in the display window. If a 5-digit code is displayed, check the following code chart. The last two digits (indicated by □□) will differ depending on the state of your camcorder.

LCD screen, viewfinder or display window



Self-diagnosis display

- C:□□:□□
  You can service your camcorder yourself.
- E:□□:□□
  Contact your Sony dealer or local authorized Sony facility.

Five-digit display	Cause and/or Corrective Actions
C:04:□□	• You are using a battery pack that is not an "InfoLITHIUM" battery pack. → Use an "InfoLITHIUM" battery pack. (p. 17)
C:21:□□	• Moisture condensation has occurred. → Remove the cassette and leave your camcorder for at least 1 hour to acclimatize. (p. 144)
C:22:□□	• The video heads are dirty. → Clean the heads using the Sony V8-25CLD cleaning cassette (not supplied). (p. 145)
C:31:□□ C:32:□□	• A malfunction other than the above that you can service has occurred. → Remove the cassette and insert it again, then operate your camcorder. → Disconnect the mains lead of the AC power adaptor or remove the battery pack. After reconnecting the power source, operate your camcorder.
E:61:□□ E:62:□□	• A malfunction that you cannot service has occurred. → Contact your Sony dealer or local authorized Sony service facility and inform them of the 5-digit code. (example: E:61:10)

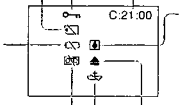
If you are unable to rectify the problem even if you try corrective actions a few times, contact your Sony dealer or local authorized Sony service facility.

English

Warning indicators and messages

If indicators and messages appear on the LCD screen, in the viewfinder or in the display window, check the following:
See the page in parentheses "( )" for more information.

Warning indicators



The still image is protected (DCR-TRV320E only)
Slow flashing:
- The still image is protected.* (p. 116)

Warning indicator as to "Memory Stick" (DCR-TRV320E only)
Slow flashing:
- No "Memory Stick" is inserted.* (p. 93)
- "Memory Stick" is not formatted correctly. (p. 79)

The battery is dead or nearly dead
Slow flashing:
- The battery is nearly dead. (p. 13)

Depending on conditions, the battery indicator may flash, even if there are 5 to 10 minutes remaining.

Warning indicator as to tape
Slow flashing:
- The tape is near the end.
- No tape is inserted.* (p. 19)
- The write-protect tab on the cassette is out (red).* (p. 20)

Fast flashing:
- The tape has run out.* (p. 19, 33)

The lithium battery is weak or is not installed (p. 125)

Self-diagnosis display (p. 132)

Moisture condensation has occurred*
Fast flashing:
- Eject the cassette, turn off your camcorder, and leave it for about 1 hour with the cassette compartment open. (p. 144)

You need to eject the cassette
Slow flashing:
- The write-protect tab on the cassette is out (red).* (p. 20)

Fast flashing:
- Moisture condensation has occurred. (p. 144)
- The tape has run out.* (p. 19, 33)
- The self-diagnosis display function is activated.* (p. 132)

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* You hear the melody or beep sound.

Warning indicators and messages

Warning messages

• CLOCK SET	Reset the date and time. (p. 89)
• FOR "InfoLITHIUM" BATTERY ONLY	Use an "InfoLITHIUM" battery pack. (p. 17)
• 8 mm TAPE → SP REC Hi8 TAPE → LP/SP REC	Use Hi8 Hi8/Digital 8 tapes when you record in the LP mode.** (p. 80)
• ⏏ TAPE END	The tape has run out.**
• NO TAPE	Insert a cassette tape.** (p. 19)
• CLEANING CASSETTE*	The video heads are dirty. (p. 145)
• FULL	The "Memory Stick" is full.** (DCR-TRV320E only) (p. 98)
• 🔑	The write-protect tab on the "Memory Stick" is set to LOCK.** (DCR-TRV320E only) (p. 91)
• NO FILE	No still image is recorded on the "Memory Stick".** (DCR-TRV320E only) (p. 110)
• NO MEMORY STICK	No "Memory Stick" is inserted. (DCR-TRV320E only) (p. 93)

* The ⊗ indicator and " CLEANING CASSETTE" message appear one after another on the LCD screen or in the viewfinder.

** You hear the melody or beep sound.

Using your camcorder abroad

Using your camcorder abroad

You can use your camcorder in any country or area with the AC power adaptor supplied with your camcorder within 100 V to 240 V AC, 50/60 Hz.

Your camcorder is a PAL system based camcorder. If you want to view the playback picture on a TV, it must be a PAL system based TV with VIDEO/AUDIO input jack.
The following shows TV colour systems used overseas.

PAL system
Australia, Austria, Belgium, China, Czech Republic, Denmark, Finland, Germany, Great Britain, Holland, Hong Kong, Italy, Kuwait, Malaysia, New Zealand, Norway, Portugal, Singapore, Slovak Republic, Spain, Sweden, Switzerland, Thailand, etc.

PAL-M system
Brazil

PAL-N system
Argentina, Paraguay, Uruguay

NTSC system
Bahama Islands, Bolivia, Canada, Central America, Chile, Colombia, Ecuador, Jamaica, Japan, Korea, Mexico, Peru, Surinam, Taiwan, the Philippines, the U.S.A., Venezuela, etc.

SECAM system
Bulgaria, France, Guyana, Hungary, Iran, Iraq, Monaco, Poland, Russia, Ukraine, etc.

Simple setting of clock by time difference

You can easily set the clock to the local time by setting a time difference. Select WORLD TIME in the menu settings. See page 76 for more information.

Использование Вашей видеокамеры за границей

Использование Вашей видеокамеры за границей

Вы можете использовать Вашу видеокамеру в любой стране или области с помощью сетевого адаптера переменного тока, прилагаемого к Вашей видеокамере, который можно использовать в пределах от 100 В до 240 В переменного тока с частотой 50/60 Гц.

Ваша видеокамера основана на системе PAL. Если Вы хотите просмотреть воспроизводимое изображение на телевизоре, то это должен быть телевизор, основанный на системе PAL, с входными гнездами VIDEO/AUDIO.
Ниже приведены системы цветного телевидения, используемые за рубежом.

Система PAL
Австралия, Австрия, Бельгия, Великобритания, Германия, Голландия, Гонконг, Дания, Испания, Италия, Китай, Кувейт, Малайзия, Новая Зеландия, Норвегия, Португалия, Сингапур, Словацкая Республика, Таиланд, Финляндия, Чешская Республика, Швейцария, Швеция и т.д.

Система PAL-M
Бразилия

Система PAL-N
Аргентина, Парагвай, Уругвай

Система NTSC
Багамские острова, Боливия, Венесуэла, Канада, Колумбия, Корея, Мексика, Перу, Суринам, США, Тайвань, Филиппины, Центральная Америка, Чили, Эквадор, Ямайка, Япония и т.д.

Система SECAM
Болгария, Венгрия, Гвиана, Ирак, Иран, Монако, Польша, Россия, Украина, Франция и т.д.

Простая установка разницы во времени на часах

Вы можете легко установить часы на местное время путем установки разницы во времени. Выберите команду WORLD TIME в установках меню. Подробные сведения приведены на стр. 76.

Maintenance information and precautions

Moisture condensation

If your camcorder is brought directly from a cold place to a warm place, moisture may condense inside your camcorder, on the surface of the tape, or on the lens. In this condition, the tape may stick to the head drum and be damaged or your camcorder may not operate correctly. If there is moisture inside your camcorder, the beep sounds and the ⌚ indicator flashes. When the ⏏ indicator flashes at the same time, the cassette is inserted in your camcorder. If moisture condenses on the lens, the indicator will not appear.

If moisture condensation occurred

None of the functions except cassette ejection will work. Eject the cassette, turn off your camcorder, and leave it for about 1 hour with the cassette compartment open. Your camcorder can be used again if the ⌚ indicator does not appear when the power is turned on again.

Note on moisture condensation
Moisture may condense when you bring your camcorder from a cold place into a warm place (or vice versa) or when you use your camcorder in a hot place as follows:
- You bring your camcorder from a ski slope into a place warmed up by a heating device
- You bring your camcorder from an air-conditioned car or room into a hot place outside
- You use your camcorder after a squall or a shower
- You use your camcorder in a high temperature and humidity place

How to prevent moisture condensation
When you bring your camcorder from a cold place into a warm place, put your camcorder in a plastic bag and tightly seal it. Remove the bag when the air temperature inside the plastic bag has reached the surrounding temperature (after about 1 hour).

Информация по уходу за аппаратом и меры предосторожности

Конденсация влаги

Если видеокамера принесена прямо из холодного места в теплое, то внутри видеокамеры, на поверхности ленты или на объективе может произойти конденсанция влаги. В таком состоянии лента может прилипнуть к барабану головки и будет повреждена или же видеокамера не сможет работать надлежащим образом. Если внутри видеокамеры произошла конденсация влаги, то прозвучит зуммерный сигнал, а на экране ЖКД будет мигать индикатор ⌚. Если в то же самое время будет мигать индикатор ⏏, это значит, что в видеокамеру вставлена кассета. Если влага сконденсировалась на объективе, индикатор появляться не будет.

Если произошла конденсация влаги

Ни одна из функций, кроме выталкивания кассеты, не будут работать. Извлеките кассету, выключите видеокамеру и оставьте ее приблизительно на 1 час с открытым кассетным. Если при повторном включении питания индикатор ⌚ не появится на дисплее, Вы можете снова пользоваться видеокамерой.

Примечания по конденсации влаги
Влага может образоваться, если Вы принесете Вашу видеокамеру из холодного места в теплое (или наоборот) или когда Вы используете Вашу видеокамеру в жарком месте в следующих случаях:
- Вы принесли Вашу видеокамеру с лыжного склона в помещение, где функционирует обогреватель
- Вы принесли Вашу видеокамеру из автомобиля или из комнаты с воздушным кондиционированием в жаркое место на улице
- Вы используете видеокамеру после грозы или дождя
- Вы используете Вашу видеокамеру в очень жарком и влажном месте.

Как предотвратить конденсацию влаги
Если видеокамера принесена из холодного места в теплое, то положите видеокамеру в полиэтиленовый пакет и плотно заклейте его. Выньте видеокамеру из полиэтиленового пакета, когда температура воздуха внутри пакета достигнет температуры окружающего воздуха (приблизительно через 1 час).

Maintenance information and precautions

Maintenance information

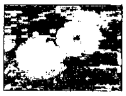
Cleaning the LCD screen

If fingerprints or dust make the LCD screen dirty, we recommend using a LCD Cleaning Kit (not supplied) to clean the LCD screen.

Cleaning the video head

To ensure normal recording and clear pictures, clean the video heads.

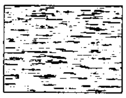
When you playback/record in the Digital8 system
The video head may be dirty when:
- mosaic-pattern noise appears on the playback picture.
- playback pictures do not move.
- playback pictures are hardly visible.
- playback pictures do not appear.
- the ⊗ indicator and " CLEANING CASSETTE" message appear one after another on the LCD screen or in the viewfinder.



or/или

When you play back in the Hi8/Standard 8 (analog) system
The video head may be dirty when:
- playback pictures contain noise.
- playback pictures are hardly visible.
- playback pictures do not appear.

or/или



If the above problems occur, clean the video heads with the Sony V8-25CLD cleaning cassette (not supplied). Check the picture and if the above problems persists repeat cleaning.

Информация по уходу за аппаратом и меры предосторожности

Информация по уходу за аппаратом

Чистка экрана ЖКД

Если на экране ЖКД появятся отпечатки или пыль, рекомендуется воспользоваться очистительным набором для ЖКД (не прилагается) для чистки ЖКД.

Чистка видеоголовок

Для обеспечения нормальной записи и четкого изображения следует периодически чистить видеоголовки.

При воспроизведении/записи в цифровой системе Dgital8
Видеоголовки возможно загрязнены, если:
- На воспроизводимом изображении появляются помехи типа мозаики.
- Воспроизводимое изображение не двигается.
- Воспроизводимое изображение с трудом различимо.
- Воспроизводимое изображение не появляется на экране.
- На экране ЖКД или в видоискателе появляются один за другим индикатор ⊗ и сообщение " CLEANINING CASSETTE".

При воспроизведении в системе (аналоговой) Hi8/стандартной системе 8
Видеоголовки возможно загрязнены, если:
- Воспроизводимое изображение содержит помехи.
- Воспроизводимое изображение с трудом различимо.
- Воспроизводимое изображение не появляется на экране.

В случае возникновения указанных выше проблем, почистите видеоголовки с помощью очистительной кассеты Sony V8-25CLD (не прилагается). Проверьте изображение и, если описанные выше проблемы не устранились, повторите чистку.

Removing dust from inside the viewfinder (DCR-TRV120E/TRV125E)

(1) ❶Remove the screw with a screwdriver (not supplied). ❷Then, while holding the RELEASE knob up, ❸turn the eyecup in a counterclockwise direction and pull it out.

(2) Clean the surface with a commercially available blower for a still camera.

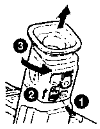
(3) Turn the eyecup in a clockwise direction, then replace the screw.

Удаление пыли изнутри видоискателя (DCR-TRV120E/TRV125E)

(1) ❶Отвинтите винт с помощью отвертки (не прилагается). ❷Затем, держа нажатой кнопку RELEASE, ❸поверните окуляр против часовой стрелки и потяните его.

(2) Почистите поверхность с помощью воздуходувки для фотоаппаратов, которая приобретается отдельно.

(3) Поверните окуляр по часовой стрелке, а затем завинтите винт обратно на место.



Caution

Do not remove any other screws. You may remove only the screw to remove the eyecup.

Внимание

Не отвинчивайте другие винты. Вы можете отвинчивать только винт для снятия окуляра.

Precautions

Camcorder operation

- Operate your camcorder on 7.2 V (battery pack) or 8.4 V (AC power adaptor).
- For DC or AC operation, use the accessories recommended in this operating instructions.
- If any solid object or liquid get inside the casing, unplug your camcorder and have it checked by a Sony dealer before operating it any further.
- Avoid rough handling or mechanical shock. Be particularly careful of the lens.
- Keep the POWER switch set to OFF (CHARGE) when you are not using your camcorder.
- Do not wrap your camcorder with a towel, for example, and operate it. Doing so might cause heat to build up inside.
- Keep your camcorder away from strong magnetic fields or mechanical vibration. Noise may appear on the image.
- Do not touch the LCD screen with your fingers or a sharp-pointed object.
- If your camcorder is used in a cold place, a residual image may appear on the LCD screen or in the viewfinder. This is not a malfunction.
- While using your camcorder, the back of the LCD screen may heat up. This is not a malfunction.

On handling tapes

Do not insert anything into the small holes on the rear of the cassette. These holes are used to sense the type and thickness of the tape and if the recording tab is in or out.

Camcorder care

- Remove the tape, and periodically turn on the power, operate the CAMERA and PLAYER sections and play back a tape for about 3 minutes when your camcorder is not to be used for a long time.
- Clean the lens with a soft brush to remove dust. If there are fingerprints on the lens, remove them with a soft cloth.
- Clean the camcorder body with a dry soft cloth, or a soft cloth lightly moistened with a mild detergent solution. Do not use any type of solvent which may damage the finish.
- Do not let sand get into your camcorder. When you use your camcorder on a sandy beach or in a dusty place, protect it from the sand or dust. Sand or dust may cause your camcorder to malfunction, and sometimes this malfunction cannot be repaired.

Меры предосторожности

Эксплуатация видеокамеры

- Эксплуатируйте видеокамеру от 7,2 В (батарейный блок) или 8,4 В (сетевой адаптер переменного тока)
- Что касается эксплуатации видеокамеры от постоянного и переменного тока, используйте принадлежности, рекомендуемые в данной инструкции по эксплуатации.
- Если какой-нибудь твердый предмет или жидкость попали внутрь корпуса, выключите видеокамеру и проверьте ее у дилера Sony перед дальнейшей ее эксплуатацией.
- Избегайте грубого обращения с видеокамерой или механических ударов. Будьте особенно осторожны с объективом.
- Если видеокамера не используется, установите выключатель POWER в положении OFF (CHARGE).
- Не заворачивайте Вашу видеокамеру, например, в полотенце, и не эксплуатируйте ее в таком состоянии. В противном случае может произойти повышение температуры внутри видеокамеры.
- Держите Вашу видеокамеру подальше от сильных магнитных полей или механической вибрации. На экране ЖКД или в видоискателе могут появиться помехи.
- Не прикасайтесь к экрану ЖКД своими пальцами или острыми предметами.
- При эксплуатации Вашей видеокамеры в холодном месте, на экране ЖКД или в видоискателе может появляться остаточное изображение. Это не является неисправностью.
- При эксплуатации Вашей видеокамеры, задняя сторона экрана ЖКД может нагреваться. Это не является неисправностью.

Обращение с лентами

Не вставляйте ничего в маленькие отверстия на задней стороне кассеты. Эти отверстия используются для определения типа и толщины ленты, а также для определения наличия или отсутствия лепестка защиты записи на ленте.

Уход за видеокамерой

- Периодически вынимайте кассету и включайте питание, оперируйте устройствами CAMERA и PLAYER и воспроизводите ленту порядка 3-х минут, если Ваша видеокамера не будет использоваться длительное время.
- Чистите объектив с помощью мягкой кисточки для удаления пыли. Если имеются отпечатки пальцев на объективе, удалите их с помощью мягкой ткани.
- Чистите корпус видеокамеры с помощью сухой мягкой ткани или мягкой ткани, слегка смоченной раствором умеренного моющего средства. Не используйте каких-либо типов растворителей, которые могут повредить отделку.
- Не допускайте попадания песка в видеокамеру. Если Вы используете видеокамеру на песчаном пляже или в каком-либо пыльном месте, предохраните аппарат от песка или пыли. Песок или пыль могут привести к неисправности аппарата, которая иногда может быть неисправимой.

Connection to your PC

When inputting the image recorded by Hi8/standard8 (analog) system into your PC, dub the image into a Digital8 ⅅ or DV tape first, and then input it into your PC.

When inputting the image recorded by Hi8/standard 8 system into Sony VAIO

The Program Capture function of DVgate motion doesn't work. To use this function, dub the image into a Digital8 ⅅ or DV tape first, and then input it into your Sony VAIO.

AC power adaptor

- Unplug the unit from the mains when you are not using the unit for a long time. To disconnect the mains lead, pull it out by the plug. Never pull the mains lead itself.
- Do not operate the unit with a damaged cord or if the unit has been dropped or damaged.
- Do not bend the mains lead forcibly, or place a heavy object on it. This will damage the cord and may cause fire or electrical shock.
- Prevent metallic objects from coming into contact with the metal parts of the connecting section. If this happens, a short may occur and the unit may be damaged.
- Always keep metal contacts clean.
- Do not disassemble the unit.
- Do not apply mechanical shock or drop the unit.
- While the unit is in use, particularly during charging, keep it away from AM receivers and video equipment. AM receivers and video equipment disturb AM reception and video operation.
- The unit becomes warm during use. This is not a malfunction.
- Do not place the unit in locations that are:
  - Extremely hot or cold
  - Dusty or dirty
  - Very humid
  - Vibrating

Подключение к Вашему персональному компьютеру

При вводе изображения, записанного в системе (аналоговой) Hi8/стандартной системе 8, в Ваш персональный компьютер, сначала сделайте копию изображения на цифровую ленту Digital8 ⅅ или DV, а затем введите его в персональный компьютер.

При вводе изображения, записанного в системе Hi8/стандартной системе 8, в программу Sony VAIO

Функция захвата изображения DVgate motion не работает. Для использования этой функции сначала скопируйте изображение на цифровую ленту Digital8 ⅅ или DV, а затем введите его в Вашу программу Sony VAIO.

Сетевой адаптер переменного тока

- Отсоедините аппарат от электрической сети, если он не используется длительное время. Для отсоединения сетевого шнура потяните его за разъем. Никогда не тяните за сам шнур.
- Не эксплуатируйте аппарат с поврежденным шнуром или же в случае, если аппарат упал или был поврежден.
- Не сгибайте сетевой провод силой и не ставьте на него тяжелые предметы. Это повредит провод и может привести к пожару или поражению электрическим током.
- Будьте осторожны, чтобы никакие металлические предметы не соприкасались с металлическими контактами соединительной пластины. Если это случится, то может произойти короткое замыкание, и аппарат может быть поврежден.
- Следите за тем, чтобы металлические контакты были чистыми.
- Не разбирайте аппарат.
- Не подвергайте аппарат механической вибрации и не роняйте его.
- При использовании аппарата, особенно во время зарядки, держите его подальше от приемников АМ-радиовещания и видеоаппаратуры. Приемники АМ-радиовещания и видеоаппаратура нарушают АМ-радиоприем и работу видеоаппаратуры.
- В процессе эксплуатации аппарат нагревается. Это является вполне нормальным.
- Не размещайте аппарат в местах:
  - Чрезмерно жарких или холодных
  - Пыльных или грязных
  - Очень влажных
  - Подверженных вибрации

Battery pack

- Use only the specified charger or video equipment with the charging function.
- To prevent accident from a short circuit, do not allow metal objects to come into contact with the battery terminals.
- Keep the battery pack away from fire.
- Never expose the battery pack to temperatures above 60°C (140°F), such as in a car parked in the sun or under direct sunlight.
- Keep the battery pack dry.
- Do not expose the battery pack to any mechanical shock.
- Do not disassemble nor modify the battery pack.
- Attach the battery pack to the video equipment securely.
- Charging while some capacity remains does not affect the original battery capacity.

Notes on dry batteries

To avoid possible damage from battery leakage or corrosion, observe the following:

- Be sure to insert the batteries with the + – polarities matched to the + – marks.
- Dry batteries are not rechargeable.
- Do not use a combination of new and old batteries.
- Do not use different types of batteries.
- Current flows from batteries when you are not using them for a long time.
- Do not use leaking batteries.

If batteries are leaking

- Wipe off the liquid in the battery compartment carefully before replacing the batteries.
- If you touch the liquid, wash it off with water.
- If the liquid get into your eyes, wash your eyes with a lot of water and then consult a doctor.

If any problem occurs, unplug your camcorder and contact your nearest Sony dealer.

Батарейный блок

- Используйте только рекомендуемое зарядное устройство или видеоаппаратуру с зарядной функцией.
- Для предотвращения несчастного случая из-за короткого замыкания не допускайте контакта металлических предметов с полюсами батарейного блока.
- Не располагайте батарейный блок вблизи огня.
- Не подвергайте батарейный блок воздействию температур свыше 60°C, например, в припаркованном под солнцем автомобиле или под прямым солнечным светом.
- Следите за тем, чтобы батарейный блок был сухим.
- Не подвергайте батарейный блок воздействию каких-либо механических ударов.
- Не разбирайте и не видоизменяйте батарейный блок.
- Прикрепляйте батарейный блок к видеоаппаратуре плотно.
- Зарядка в случае оставшейся емкости заряда не отражается на емкости первоначального заряда.

Примечания к сухим батарейкам

Во избежание возможного повреждения видеокамеры вследствие утечки внутреннего вещества батареек или коррозии соблюдайте следующее:

- При установке батареек соблюдайте правильную полярность + – в соответствии с метками + –.
- Сухие батарейки нельзя перезаряжать.
- Не используйте новые батарейки вместе со старыми.
- Не используйте батарейки разного типа.
- Если батарейки не используются длительное время, они постепенно разряжаются.
- Не используйте батарейки, которые потекли.

Если произошла утечка внутреннего вещества батареек

- Перед тем, как заменить батарейки, тщательно протрите остатки жидкости в отсеке для батареек.
- В случае попадания жидкости на кожу, промойте жидкость водой.
- В случае попадания жидкости в глаза, промойте свои глаза большим количеством воды, после чего обратитесь к врачу.

В случае возникновения каких-либо проблем, отключите Вашу видеокамеру от источника питания и обратитесь в ближайший сервисный центр Sony.

— Quick Reference —

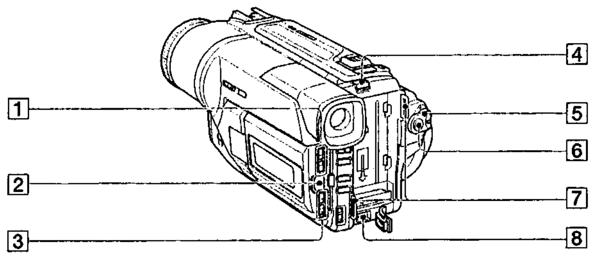
Identifying the parts and controls

Camcorder

— Оперативный справочник —

Обозначение частей и регуляторов

Видеокамера

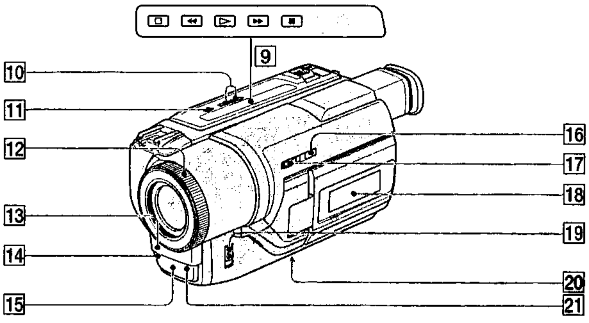


1 **LCD BRIGHT buttons** (p. 23)
2 **OPEN button** (p. 21)
3 **VOLUME buttons** (p. 33)
4 **BATT RELEASE lever** (p. 12)
5 **POWER switch** (p. 21)
6 **START/STOP button** (p. 21)
7 **Hooks for shoulder strap** (p. 154)
8 **DC IN jack** (p. 13)

This mark indicates that this product is a genuine accessory for Sony video products.
When purchasing Sony video products, Sony recommends that you purchase accessories with this "GENUINE VIDEO ACCESSORIES" mark.

1 **Кнопки LCD BRIGHT** (стр. 23)
2 **Кнопка OPEN** (стр. 21)
3 **Кнопки VOLUME** (стр. 33)
4 **Рычаг BATT RELEASE** (стр. 12)
5 **Переключатель POWER** (стр. 21)
6 **Кнопка START/STOP** (стр. 21)
7 **Крючки для плечевого ремня** (стр. 154)
8 **Гнездо DC IN** (стр. 13)

Данный знак означает, что это изделие является подлинной принадлежностью для видеоаппаратуры Sony.
При покупке видеоаппаратуры Sony рекомендуется приобретать для нее принадлежности Sony с таким знаком "GENUINE VIDEO ACCESSORIES".

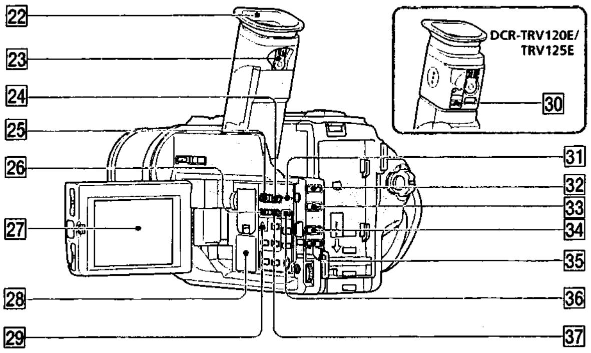


9 **Video control buttons** (p. 33, 36)
■ STOP (stop)
◀◀ REW (rewind)
▶ PLAY (playback)
▶▶ FF (fastforward)
❚❚ PAUSE (pause)
The control buttons light up when you set the POWER switch to PLAYER.
10 **EDITSEARCH buttons** (p. 31)
11 **S.LASER LINK button** (p. 40)
12 **Focus ring** (p. 57)
13 **Microphone**
14 **Camera recording lamp** (p. 21)
15 **Infrared rays emitter** (p. 28, 40)
16 **SUPER NIGHTSHOT button** (p. 28)
17 **NIGHTSHOT switch** (p. 28)
18 **Display window** (p. 159)
19 **FOCUS switch** (p. 57)
20 **Tripod receptacle** (base)
Make sure that the length of the tripod screw is less than 6.5 mm (9/32 inch). Otherwise, you cannot attach the tripod securely and the screw may damage your camcorder.
21 **Remote sensor** (p. 157)

What is SUPER LASER LINK?
The super laser link system sends and receives pictures and sound between video equipment having the super laser link mark by using infrared rays.

9 **Кнопки видеоконтроля** (стр. 33, 36)
■ STOP (остановка)
◀◀ REW (ускоренная перемотка назад)
▶ PLAY (воспроизведение
▶▶ FF (ускоренная перемотка вперед)
❚❚ PAUSE (пауза)
Кнопки контроля высвечиваются при установке переключателя POWER в положение PLAYER.
10 **Кнопка EDITSEARCH** (стр. 31)
11 **Кнопка S.LASER LINK** (стр. 40)
12 **Кольцо фокусировки** (стр. 57)
13 **Микрофон**
14 **Лампа записи видеокамеры** (стр. 21)
15 **Излучатель инфракрасных лучей** (стр. 28, 40)
16 **Кнопка SUPER NIGHTSHOT** (стр. 28)
17 **Переключатель NIGHTSHOT** (стр. 28)
18 **Окошко дисплея** (стр. 159)
19 **Переключатель FOCUS** (стр. 57)
20 **Гнездо для треноги** (основание)
Убедитесь, что длина винта треноги менее 6,5 мм. В противном случае Вы не сможете надежно прикрепить треногу, а винт может повредить Вашу видеокамеру.
21 **Датчик дистанционного управления** (стр. 157)

Что такое SUPER LASER LINK?
Система лазерного суперканала передачи сигналов посылает и принимает сигналы изображения и звука между видеоаппаратурой, имеющей знак лазерного суперканала передачи сигналов, с помощью инфракрасных лучей.

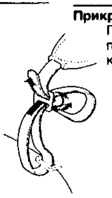


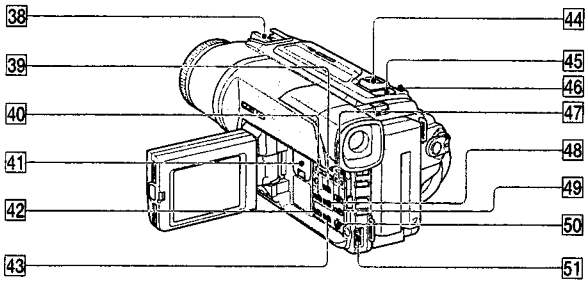
22 **Eyecup**
23 **Viewfinder lens adjustment lever** (p. 25)
24 **MEMORY INDEX button*** (p. 111)
25 **MEMORY PLAY button*** (p. 109)
26 **MEMORY – button*** (p. 102, 109)
27 **LCD screen** (p. 23)
28 **Speaker**
29 **⏲ (self-timer) button*** (p. 30)
30 **Eyecup RELEASE knob**** (p. 146)
31 **MEMORY DELETE button*** (p. 118)
32 **FADER button** (p. 47)
33 **BACK LIGHT button** (p. 27)
34 **PROGRAM AE button** (p. 55)
35 **EXPOSURE button** (p. 56)
36 **MEMORY MIX button*** (p. 102)
37 **MEMORY + button*** (p. 102, 109)
* DCR-TRV320E only
** DCR-TRV120E/TRV125E

Attaching the shoulder strap
Attach the shoulder strap supplied with your camcorder to the hooks for the shoulder strap.

22 **Окуляр**
23 **Рычаг регулировки объектива видоискателя** (стр. 25)
24 **Кнопка MEMORY INDEX*** (стр. 111)
25 **Кнопка MEMORY PLAY*** (стр. 109)
26 **Кнопка MEMORY –*** (стр. 102, 109)
27 **Экран ЖКД** (стр. 23)
28 **Динамик**
29 **Кнопка ⏲ (таймера самозапуска)*** (стр. 30)
30 **Кнопка освобождения окуляра RELEASE**** (стр. 146)
31 **Кнопка MEMORY DELETE*** (стр. 118)
32 **Кнопка FADER** (стр. 47)
33 **Кнопка BACK LIGHT** (стр. 27)
34 **Кнопка PROGRAM AE** (стр. 55)
35 **Кнопка EXPOSURE** (стр. 56)
36 **Кнопка MEMORY MIX*** (стр. 102)
37 **Кнопка MEMORY +*** (стр. 102, 109)
* Только DCR-TRV320E
** DCR-TRV120E/TRV125E

Прикрепление плечевого ремня
Прикрепите плечевой ремень, прилагаемый к Вашей видеокамере, к крючкам для плечевого ремня.





38 **Intelligent accessory shoe**
39 **DATA CODE button** (p. 35)
40 **DISPLAY button** (p. 34)
41 **Lithium battery compartment** (p. 126)
42 **PB ZOOM button** (p. 66)
43 **TITLE button** (p. 59)
44 **Power Zoom lever** (p. 24)
45 **"Memory Stick" lamp***
This lamp lights up while "Memory Stick" is in the "Memory Stick" compartment.
46 **PHOTO button** (p. 41)
47 **DIGITAL EFFECT button** (p. 52, 65)
48 **END SEARCH button** (p. 31)
49 **PICTURE EFFECT button** (p. 50, 64)
50 **MENU button** (p. 45, 76)
51 **SEL/PUSH EXEC dial** (p. 45, 76)
* DCR-TRV320E only

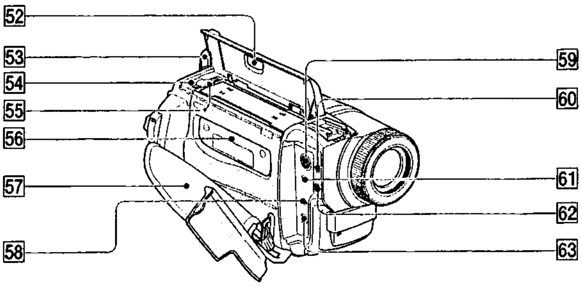
Intelligent Accessory Shoe

Notes on the intelligent accessory shoe
- The intelligent accessory shoe supplies power to optional accessories such as a video light or microphone.
- The intelligent accessory shoe is linked to the POWER switch, allowing you to turn the power supplied by the shoe on and off. Refer to the operating instructions of the accessory for further information.
- The intelligent accessory shoe has a safety device for fixing the installed accessory securely. To connect an accessory, press down and push it to the end, and then tighten the screw.
- To remove an accessory, loosen the screw, and then press down and pull out the accessory.

38 **Держатель для установки принадлежностей**
39 **Кнопка DATA CODE** (стр. 35)
40 **Кнопка DISPLAY** (стр. 34)
41 **Отсек литиевой батарейки** (стр. 126)
42 **Кнопка PB ZOOM** (стр. 66)
43 **Кнопка TITLE** (стр. 59)
44 **Рычаг приводного вариообъектива** (стр. 24)
45 **Лампочка "Memory Stick"***
Эта лампочка высвечивается в то время, когда "Memory Stick" вставлена в отсек "Memory Stick".
46 **Кнопка PHOTO** (стр. 41)
47 **Кнопка DIGITAL EFFECT** (стр. 52, 65)
48 **Кнопка END SEARCH** (стр. 31)
49 **Кнопка PICTURE EFFECT** (стр. 50, 64)
50 **Кнопка MENU** (стр. 45, 76)
51 **Диск SEL/PUSH EXEC** (стр. 45, 76)
* Только DCR-TRV320E

Intelligent Accessory Shoe

Примечания относительно держателя для установки принадлежностей
- Держатель для установки принадлежностей подает питание на вспомогательные принадлежности, такие как видеоподсветка или микрофон.
- Держатель для установки принадлежностей связан с переключателем POWER, позволяя Вам включать и выключать подаваемое через держатель питание. Подробные сведения приведены в инструкции по эксплуатации вспомогательных принадлежностей.
- В держателе для установки вспомогательных принадлежностей имеется предохранительное устройство для надежной фиксации установленной принадлежности. Для подсоединения принадлежности нажмите ее вниз и нажмите до упора, а затем затяните винт.
- Для снятия принадлежности ослабьте винт, а затем нажмите принадлежность вниз и потяните ее.



52 **EJECT button** (p. 19)

53 **Viewfinder** (p. 25)

54 **Access lamp*** (p. 93)

55 **"Memory Stick" compartment*** (p. 93)

56 **Cassette compartment** (p. 19)

57 **Grip strap**

58 **LANC ⏻ control jack** (DCR-TRV120E/TRV125E)
LANC ⏻/DIGITAL I/O jack (DCR-TRV320E)
LANC stands for Local Application Control Bus System. The LANC control jack is used for controlling the tape transport of video equipment and other peripherals connected to the video equipment. This jack has the same function as the jack indicated as CONTROL L or REMOTE.

59 **S VIDEO jack** (p. 44, 72)

60 **🎧 (headphones) jack**

61 **AUDIO/VIDEO out jack** (p. 44, 72)

62 **MIC jack (PLUG IN POWER)**
Connect an external microphone (not supplied). This jack also accepts a "plug-in-power" microphone.

63 **i. DV OUT jack** (p. 74)
The i. DV OUT jack is i.LINK compatible.

* DCR-TRV320E only

52 **Кнопка EJECT** (стр. 19)

53 **Видоискатель** (стр. 25)

54 **Лампочка доступа*** (стр. 93)

55 **Отсек "Memory Stick"*** (стр. 93)

56 **Кассетный отсек** (стр. 19)

57 **Ремень для захвата**

58 **Гнездо управления LANC ⏻** (DCR-TRV120E/TRV125E)
Гнездо управления LANC ⏻/DIGITAL I/O (DCR-TRV320E)
LANC означает систему канала местного управления. Гнездо управления LANC используется для контроля за перемещением ленты видеоаппаратуры и периферийных устройств, подключенных к ней. Данное гнездо имеет такую же функцию, как и разъемы, обозначенные как CONTROL L или REMOTE.

58 **Гнездо S VIDEO** (стр. 44, 72)

60 **Гнездо 🎧 (головные телефоны)**

61 **Выходное гнездо AUDIO/VIDEO** (стр. 44, 72)

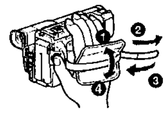
62 **Гнездо MIC (PLUG IN POWER)**
Для подсоединения внешнего микрофона (не прилагается). Это гнездо также позволяет подключить микрофон "с выключателем питания".

63 **Гнездо i. DV OUT** (стр. 74)
Гнездо i. DV OUT совместимо с каналом передачи сигналов i.LINK.

* Только DCR-TRV320E

Fastening the grip strap

Пристегивание ремня для захвата



Fasten the grip strap firmly.

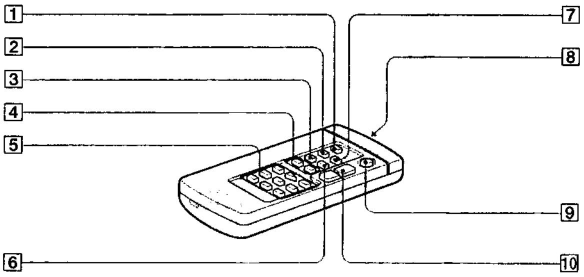
Пристегните ремень для захвата плотно.

Remote Commander

The buttons that have the same name on the Remote Commander as on your camcorder function identically to the buttons on your camcorder.

Пульт дистанционного управления

Кнопки пульта дистанционного управления, которые имеют одинаковые наименования с кнопками на видеокамере, функционируют идентично.



1 **PHOTO button** (p. 41)

2 **DISPLAY button** (p. 34)

3 **SEARCH MODE button** (p. 68, 70, 71)

4 **⏮/⏭ buttons** (p. 68, 70, 71)

5 **Tape transport buttons** (p. 36)

6 **DATA CODE button** (p. 35)

7 **ZERO SET MEMORY button** (p. 63, 67)

8 **Transmitter**
Point toward the remote sensor to control the camcorder after turning on the camcorder.

9 **START/STOP button** (p. 21)

10 **Power zoom button** (p. 24)

1 **Кнопка PHOTO** (стр. 41)

2 **Кнопка DISPLAY** (стр. 34)

3 **Кнопка SEARCH MODE** (стр. 68, 70, 71)

4 **Кнопки ⏮/⏭** (стр. 68, 70, 71)

5 **Кнопки перемещения ленты** (стр. 36)

6 **Кнопка DATA CODE** (стр. 35)

7 **Кнопка ZERO SET MEMORY** (стр. 63, 67)

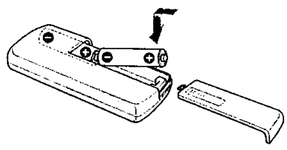
8 **Передатчик**
Направьте на датчик для управления видеокамерой после включения видеокамеры.

9 **Кнопка START/STOP** (р. 21)

10 **Кнопка приводного вариообъектива** (стр. 24)

To prepare the Remote Commander
Insert 2 size R6 (AA) batteries by matching the + and – polarities on the batteries to the + – marks inside the battery compartment.

Для подготовки пульта дистанционного управления
Вставьте 2 батарейки R6 (размера AA), соблюдая надлежащую полярность + и – на батарейках со знаками + – внутри отсека для батареек.



Notes on the Remote Commander

- Point the remote sensor away from strong light sources such as direct sunlight or overhead lighting. Otherwise, the Remote Commander may not function properly.
- Your camcorder works in the Commander mode VTR 2. Commander modes 1, 2 and 3 are used to distinguish your camcorder from other Sony VCRs to avoid remote control misoperation. If you use another Sony VCR in the Commander mode VTR 2, we recommend changing the Commander mode or covering the sensor of the VCR with black paper.

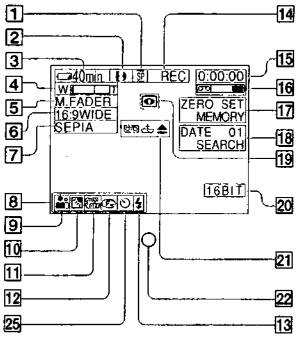
Примечания к пульту дистанционного управления

- Держите дистанционный датчик подальше от сильных источников света, как например, прямые солнечные лучи или иллюминация. В противном случае дистанционное управление может не действовать.
- Данная видеокамера работает в режиме пульта дистанционного управления VTR 2. Режимы пульта дистанционного управления 1, 2 и 3 используются для отличия данной видеокамеры от других КВМ фирмы Sony во избежание неправильной работы дистанционного управления. Если Вы используете другой КВМ фирмы Sony, работающий в режиме VTR 2, мы рекомендуем Вам изменить режим пульта дистанционного управления или закрыть дистанционный датчик КВМ черной бумагой.

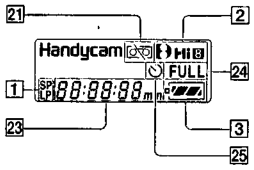
Operation indicators

Рабочие индикаторы

LCD screen and Viewfinder/ Экран ЖКД и Видоискатель



Display window/Окошко дисплея



1 **Recording mode indicator/Mirror mode indicator** (p. 23)

2 **Format indicator** (p. 123)
D, **Hi8** or 8 indicator appears.

3 **Remaining battery time indicator** (p. 13, 26)

4 **Exposure indicator** (p. 56)/**Zoom indicator** (p. 24)

5 **Fader indicator** (p. 47)/**Digital effect indicator** (p. 52, 65)

6 **Wide mode indicator** (p. 45)

7 **Picture effect indicator** (p. 50, 64)

8 **LCD bright indicator** (p. 23)/**Volume indicator** (p. 33)/**Data code indicator** (p. 35)

9 **PROGRAM AE indicator** (p. 55)

10 **Backlight indicator** (p. 27)

11 **SteadyShot off indicator** (p. 77)

12 **Manual focusing indicator** (p. 57)

13 **Video flash ready indicator**
This indicator appears when you use the video flash light (not supplied).

1 **Индикатор режима записи/индикатор зеркального режима** (стр. 23)

2 **Индикатор формата** (стр. 123)
Появится индикатор D, **Hi8** или 8.

3 **Индикатор времени оставшегося заряда батарейного блока** (стр. 13, 26)

4 **Индикатор экспозиции** (стр. 56)/**индикатор вариообъектива** (стр. 24)

5 **Индикатор фейдера** (стр. 47)/**индикатор цифрового эффекта** (стр. 52, 65)

6 **Индикатор широкоформатного режима** (стр. 45)

7 **Индикатор эффекта изображения** (стр. 50, 64)

8 **Индикатор яркости ЖКД** (стр. 23)/**индикатор громкости** (стр. 33)/**индикатор кода данных** (стр. 35)

9 **Индикатор PROGRAM AE** (стр. 55)

10 **Индикатор задней подсветки** (стр. 27)

11 **Индикатор выключенной функции устойчивой съемки** (стр. 83)

12 **Индикатор ручной фокусировки** (стр. 57)

13 **Индикатор готовности видеовспышки**
Этот индикатор появляется, когда Вы используете видеовспышку (не прилагается).

Identifying the parts and controls

14 **STBY/REC indicator** (p. 21)/**Video control mode** (p. 36)

15 **Tape counter** (p. 26, 63, 67)/**Time code indicator** (p. 26)/**Self-diagnosis display indicator** (p. 132)/**Tape photo recording indicator** (p. 41)

16 **Remaining tape indicator** (p. 26)

17 **ZERO SET MEMORY indicator** (p. 63, 67)

18 **Search mode indicator** (p. 31, 68, 70, 71)

19 **NIGHTSHOT indicator** (p. 28)

20 **Audio mode indicator** (p. 80)

21 **Warning indicators** (p. 133)

22 **Recording lamp** (p. 21)
This indicator appears in the viewfinder.

23 **Tape counter** (p. 26, 63, 67)/**Time code indicator** (p. 26)/**Self-diagnosis display indicator** (p. 132)/**Remaining battery time indicator** (p. 13, 26)

24 **FULL charge indicator** (p. 13)

25 **Self-timer indicator*** (p. 30)

***DCR-TRV320E only**

Обозначение частей и регуляторов

14 **Индикатор STBY/REC** (стр. 21)/**режим видеоконтроля** (стр. 36)

15 **Индикатор счетчика ленты** (стр. 26, 63, 67)/**индикатор кода времени** (стр. 26)/**индикатор функции самодиагностики** (стр. 140)/**индикатор фотосъемки на ленту** (стр. 41)

16 **Индикатор оставшейся ленты** (стр. 26)

17 **Индикатор ZERO SET MEMORY** (стр. 63, 67)

18 **Индикатор режима поиска** (стр. 31, 68, 70, 71)

19 **Индикатор NIGHTSHOT** (стр. 28)

20 **Индикатор аудиорежима** (стр. 86)

21 **Предупреждающие индикаторы** (стр. 141)

22 **Лампочка записи** (стр. 21)
В видоискателе появится индикатор.

23 **Индикатор счетчика ленты** (стр. 26, 63, 67)/**индикатор кода времени** (стр. 26)/**индикатор функции самодиагностики** (стр. 140)/**индикатор времени оставшегося заряда батарейного блока** (стр. 13, 26)

24 **Индикатор зарядки FULL** (стр. 13)

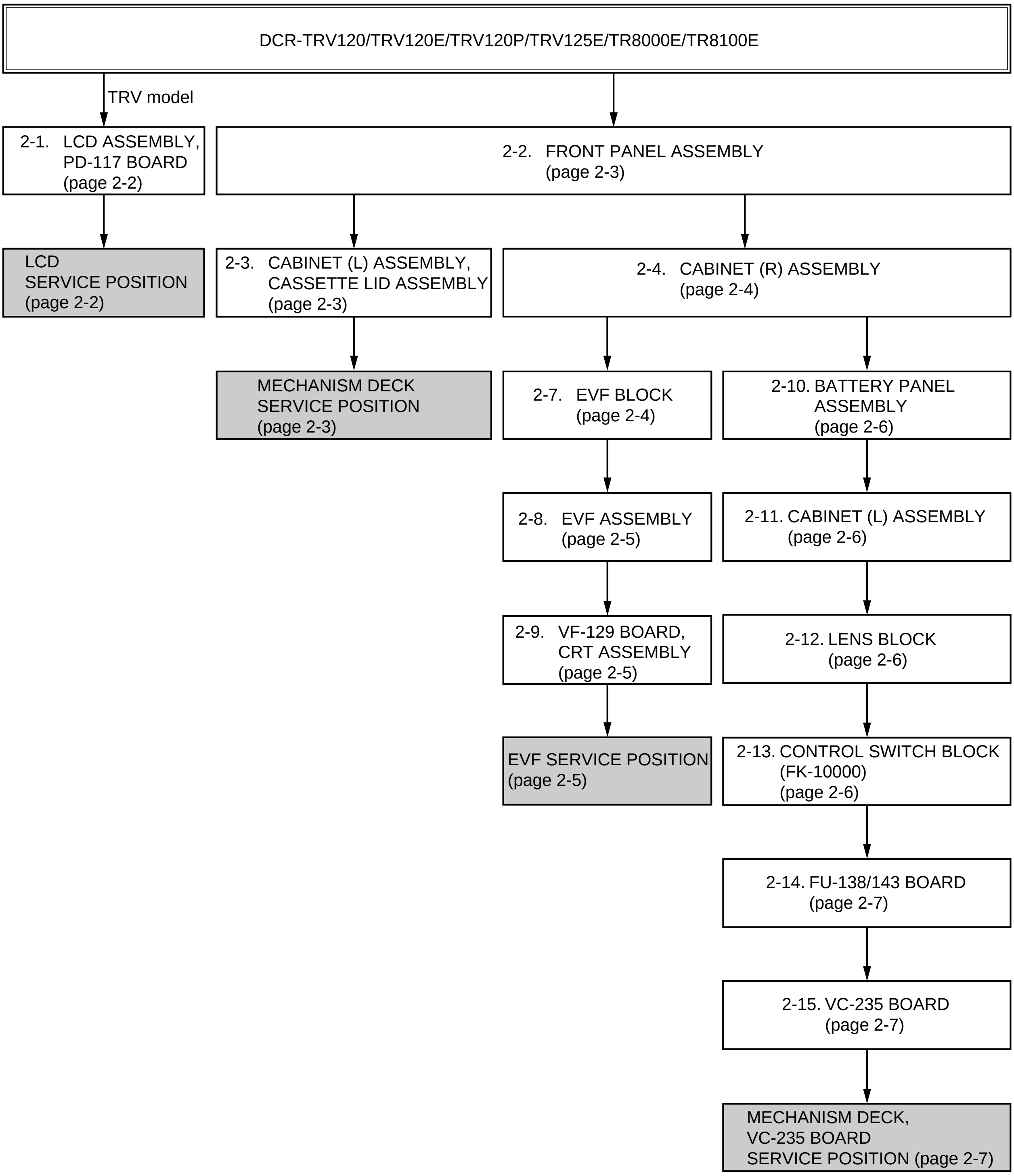
25 **Индикатор таймера самозапуска*** (стр. 30)

*** Только DCR-TRV320E**

SECTION 2
DISASSEMBLY

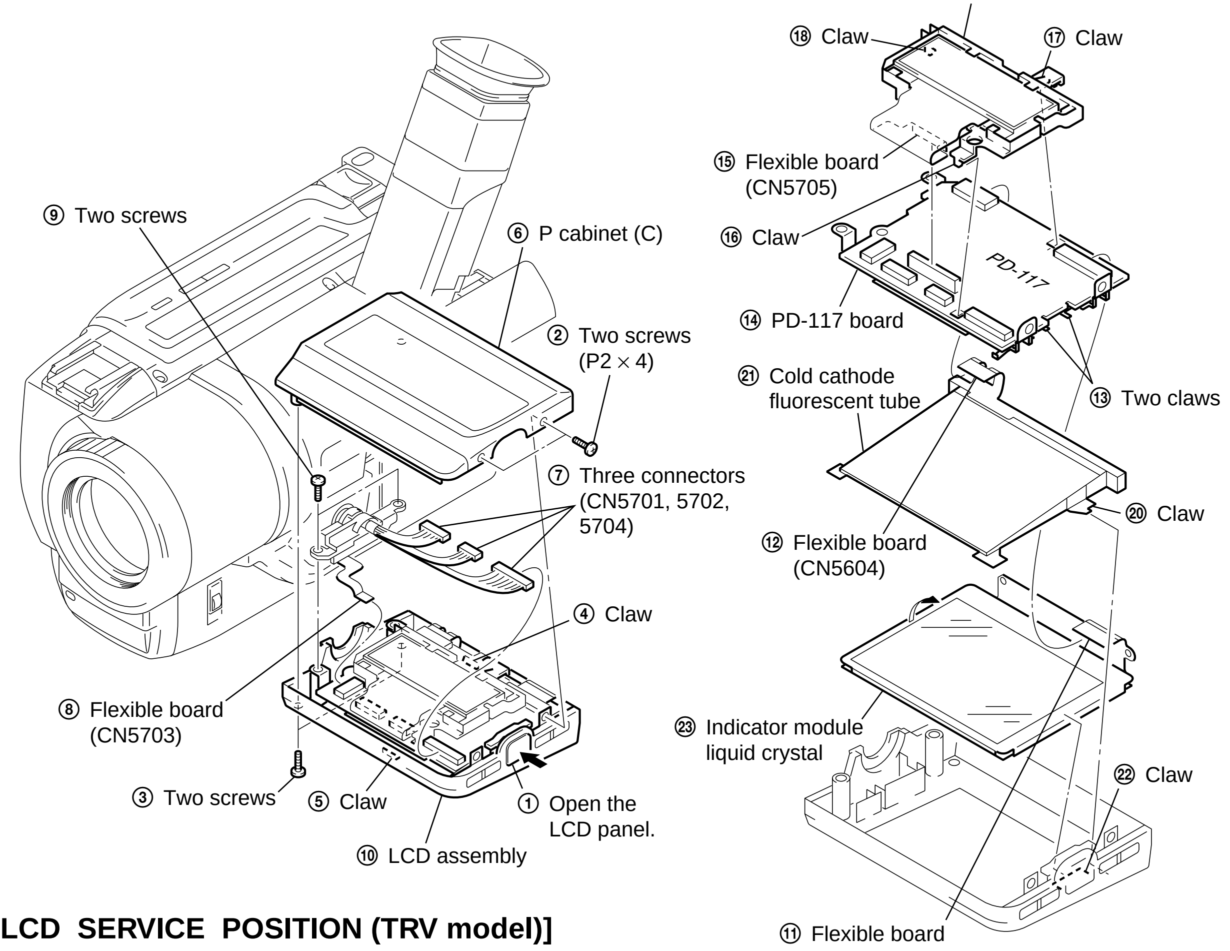
- This set can be disassembled in the order shown below.

Note: TRV model : DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model : DCR-TR8000E/TR8100E

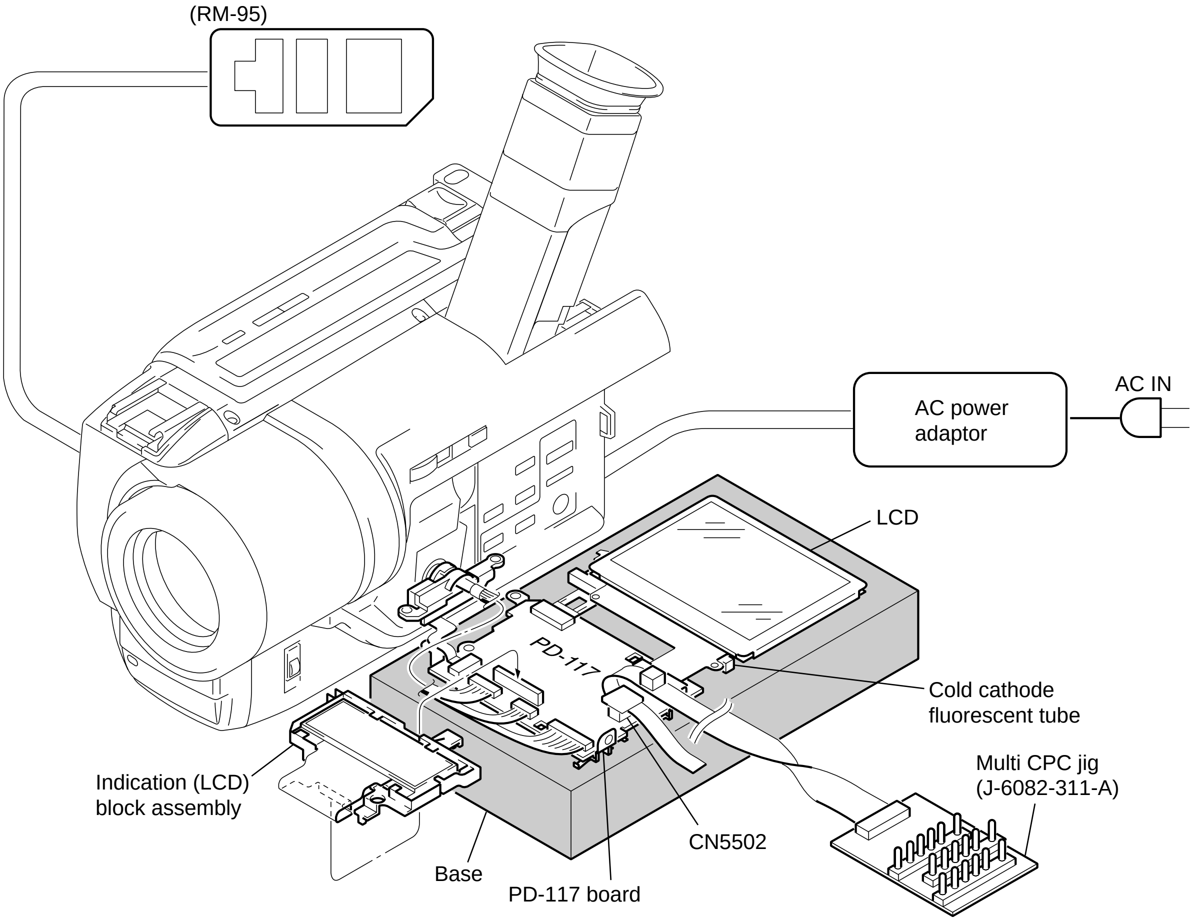

DCR-TRV120/TRV120E/TRV120P/TRV125E/TR8000E/TR8100E
TRV model
2-1. LCD ASSEMBLY, PD-117 BOARD (page 2-2)
2-2. FRONT PANEL ASSEMBLY (page 2-3)
LCD SERVICE POSITION (page 2-2)
2-3. CABINET (L) ASSEMBLY, CASSETTE LID ASSEMBLY (page 2-3)
2-4. CABINET (R) ASSEMBLY (page 2-4)
MECHANISM DECK SERVICE POSITION (page 2-3)
2-7. EVF BLOCK (page 2-4)
2-10. BATTERY PANEL ASSEMBLY (page 2-6)
2-8. EVF ASSEMBLY (page 2-5)
2-11. CABINET (L) ASSEMBLY (page 2-6)
2-9. VF-129 BOARD, CRT ASSEMBLY (page 2-5)
2-12. LENS BLOCK (page 2-6)
EVF SERVICE POSITION (page 2-5)
2-13. CONTROL SWITCH BLOCK (FK-10000) (page 2-6)
2-14. FU-138/143 BOARD (page 2-7)
2-15. VC-235 BOARD (page 2-7)
MECHANISM DECK, VC-235 BOARD SERVICE POSITION (page 2-7)

Note: Follow the disassembly procedure in the numerical order given.

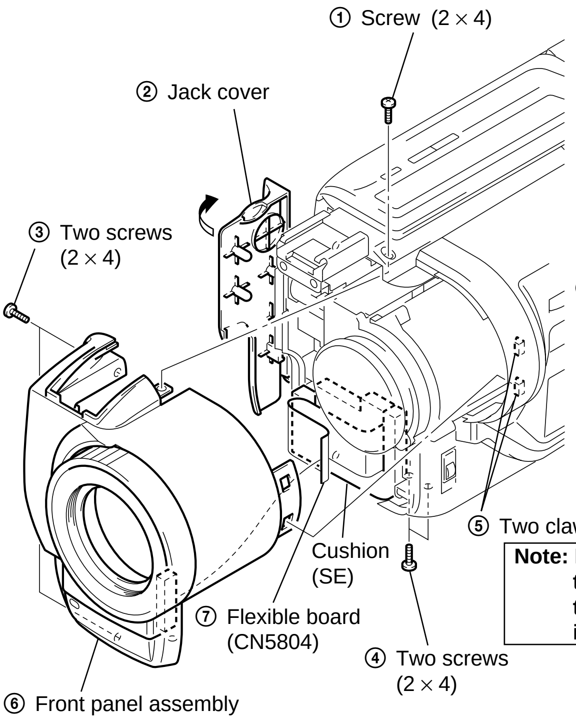
2-1. LCD ASSEMBLY, PD-117 BOARD (TRV model)


⑲ Indication (LCD) block assembly
⑱ Claw
⑰ Claw
⑮ Flexible board (CN5705)
⑨ Two screws
⑥ P cabinet (C)
⑯ Claw
PD-117
⑭ PD-117 board
② Two screws (P2 × 4)
㉑ Cold cathode fluorescent tube
⑬ Two claws
⑦ Three connectors (CN5701, 5702, 5704)
⑳ Claw
⑫ Flexible board (CN5604)
④ Claw
⑧ Flexible board (CN5703)
㉓ Indicator module liquid crystal
㉒ Claw
③ Two screws
⑤ Claw
① Open the LCD panel.
⑩ LCD assembly
⑪ Flexible board (CN5501)

[LCD SERVICE POSITION (TRV model)]

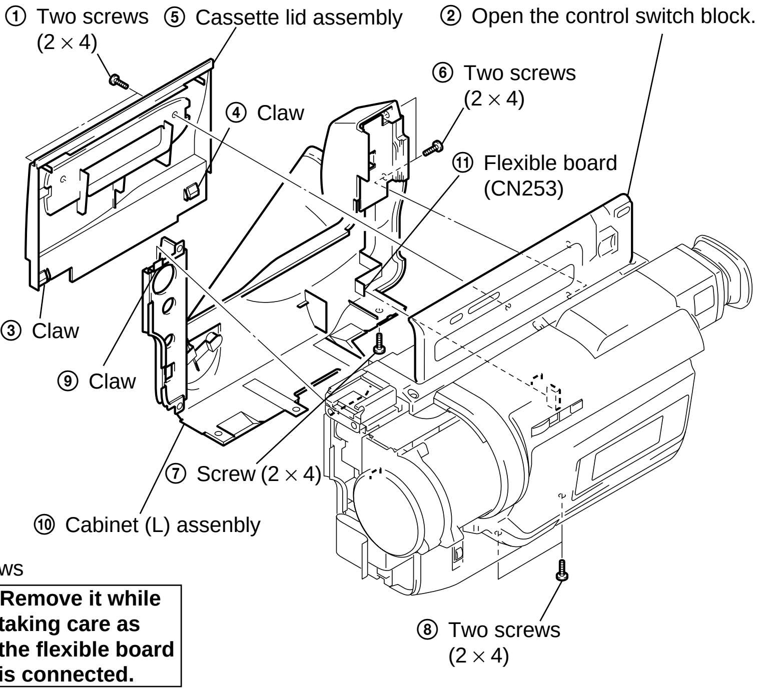

Adjustment remote commander (RM-95)
AC IN
AC power adaptor
LCD
PD-117
Cold cathode fluorescent tube
Multi CPC jig (J-6082-311-A)
Indication (LCD) block assembly
CN5502
Base
PD-117 board

2-2. FRONT PANEL ASSEMBLY


① Screw (2 × 4)
② Jack cover
③ Two screws (2 × 4)
Cushion (SE)
⑦ Flexible board (CN5804)
⑤ Two claws
④ Two screws (2 × 4)
⑥ Front panel assembly

Note: Remove it while taking care as the flexible board is connected.

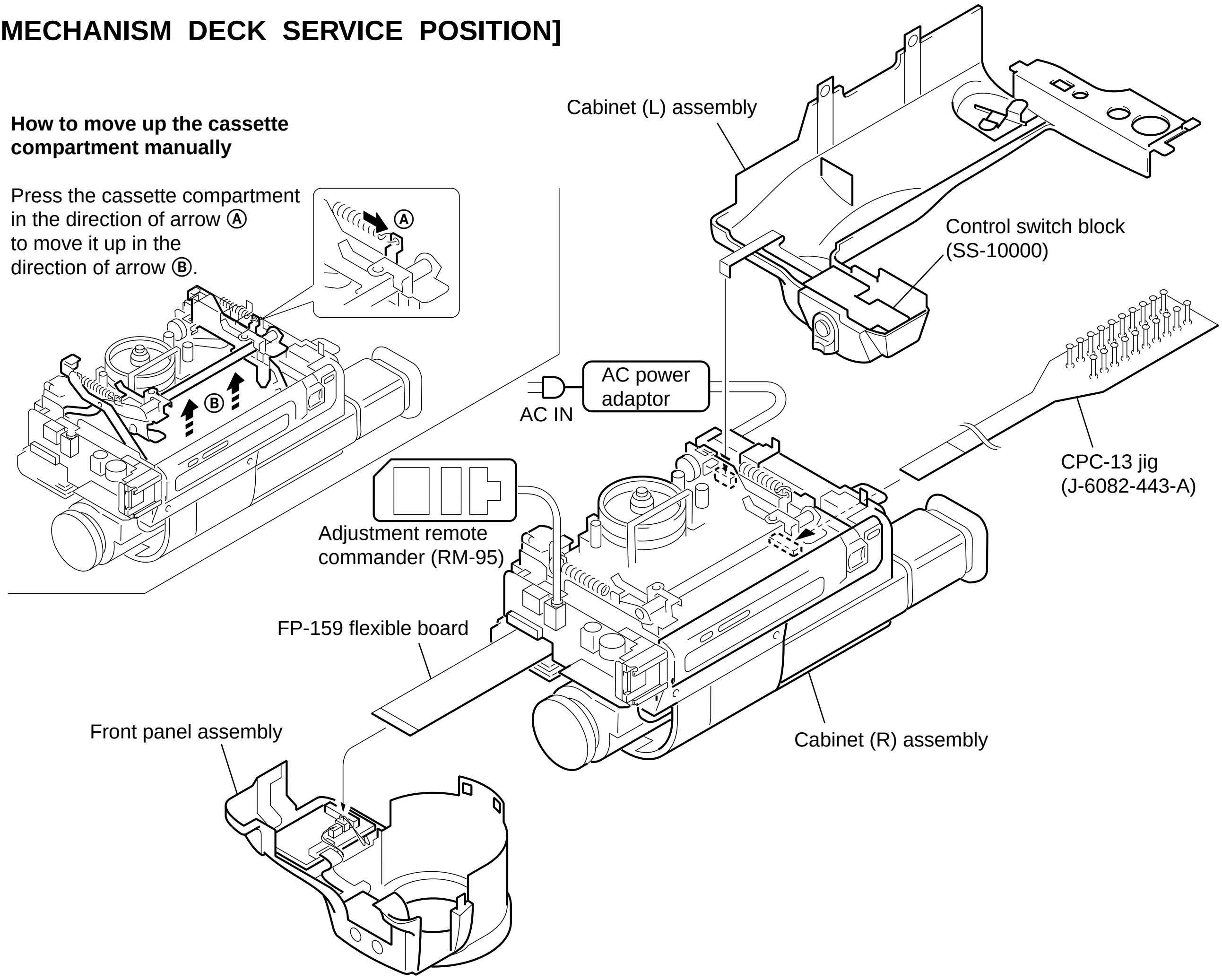
2-3. CABINET (L) ASSEMBLY, CASSETTE LID ASSEMBLY


① Two screws (2 × 4)
⑤ Cassette lid assembly
② Open the control switch block.
⑥ Two screws (2 × 4)
④ Claw
⑪ Flexible board (CN253)
③ Claw
⑨ Claw
⑦ Screw (2 × 4)
⑩ Cabinet (L) assenbly
⑧ Two screws (2 × 4)

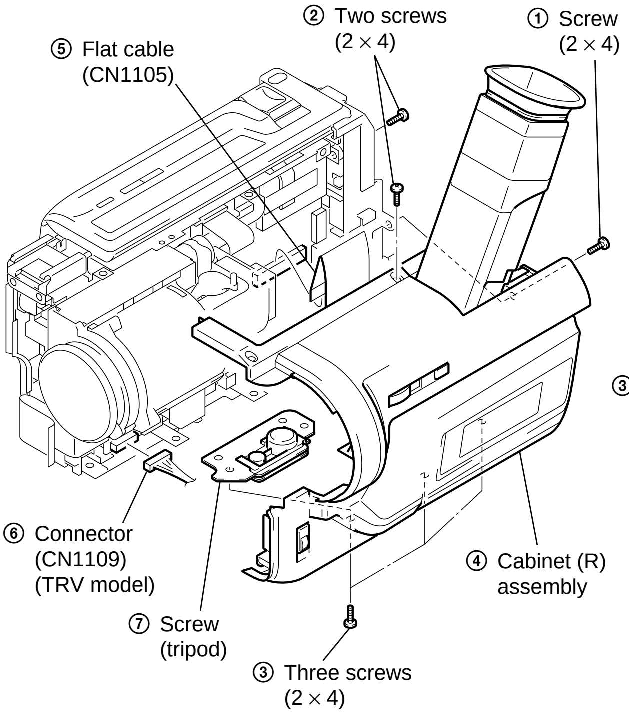
[MECHANISM DECK SERVICE POSITION]

- **How to move up the cassette compartment manually**

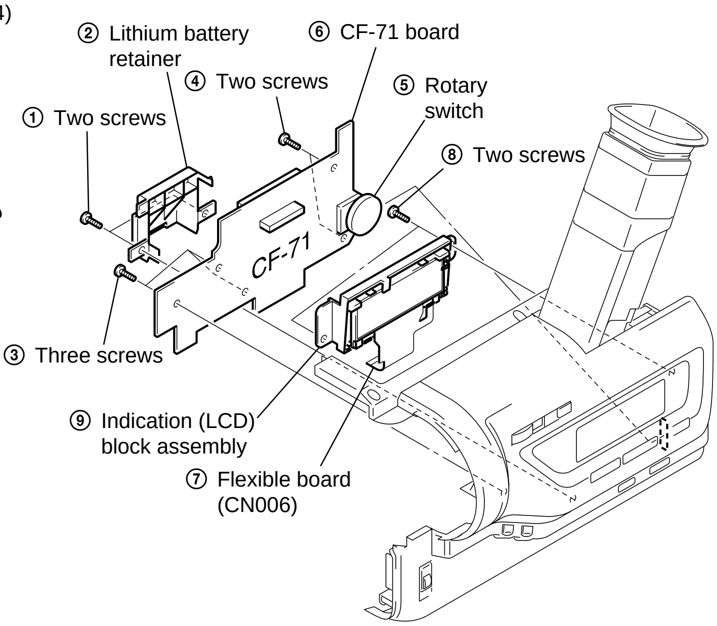
Press the cassette compartment in the direction of arrow Ⓐ to move it up in the direction of arrow Ⓑ.


Ⓐ
Ⓑ
Cabinet (L) assembly
Control switch block (SS-10000)
AC power adaptor
AC IN
CPC-13 jig (J-6082-443-A)
Adjustment remote commander (RM-95)
FP-159 flexible board
Front panel assembly
Cabinet (R) assembly

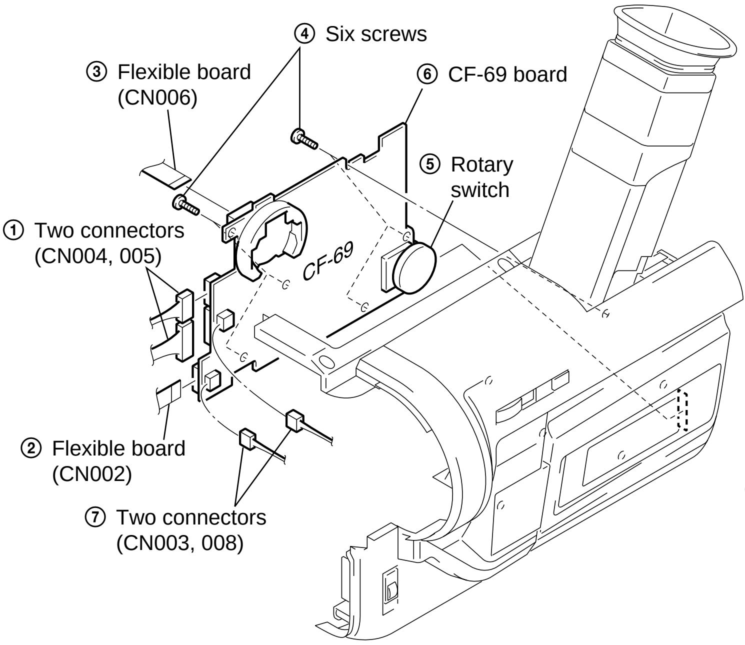
2-4. CABINET (R) ASSEMBLY


② Two screws
(2 × 4)
① Screw
(2 × 4)
⑤ Flat cable
(CN1105)
⑥ Connector
(CN1109)
(TRV model)
④ Cabinet (R)
assembly
⑦ Screw
(tripod)
③ Three screws
(2 × 4)

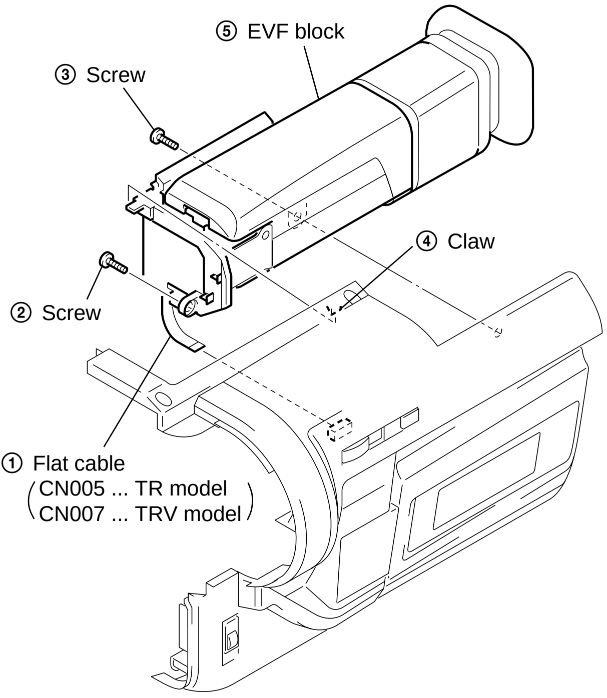
2-6. CF-71 BOARD (TR model)


② Lithium battery
retainer
⑥ CF-71 board
④ Two screws
⑤ Rotary
switch
① Two screws
⑧ Two screws
CF-71
③ Three screws
⑨ Indication (LCD)
block assembly
⑦ Flexible board
(CN006)

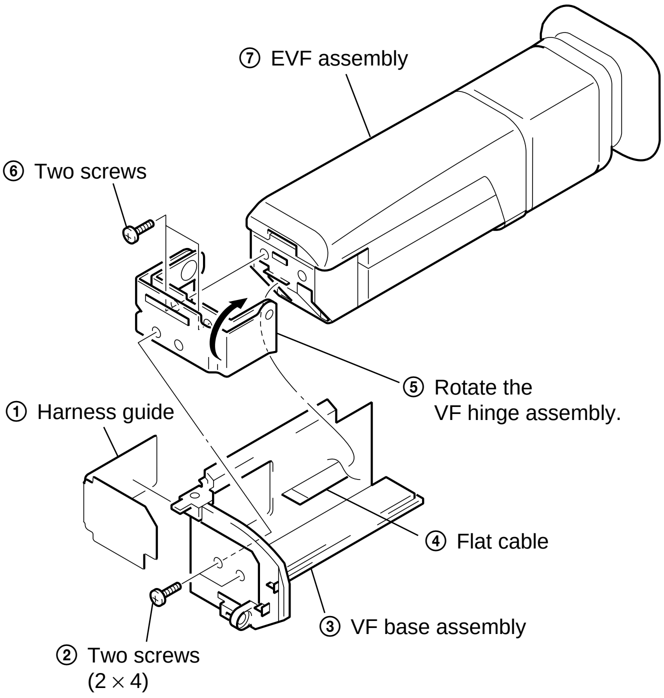
2-5. CF-69 BOARD (TRV model)


④ Six screws
③ Flexible board
(CN006)
⑥ CF-69 board
⑤ Rotary
switch
① Two connectors
(CN004, 005)
CF-69
② Flexible board
(CN002)
⑦ Two connectors
(CN003, 008)

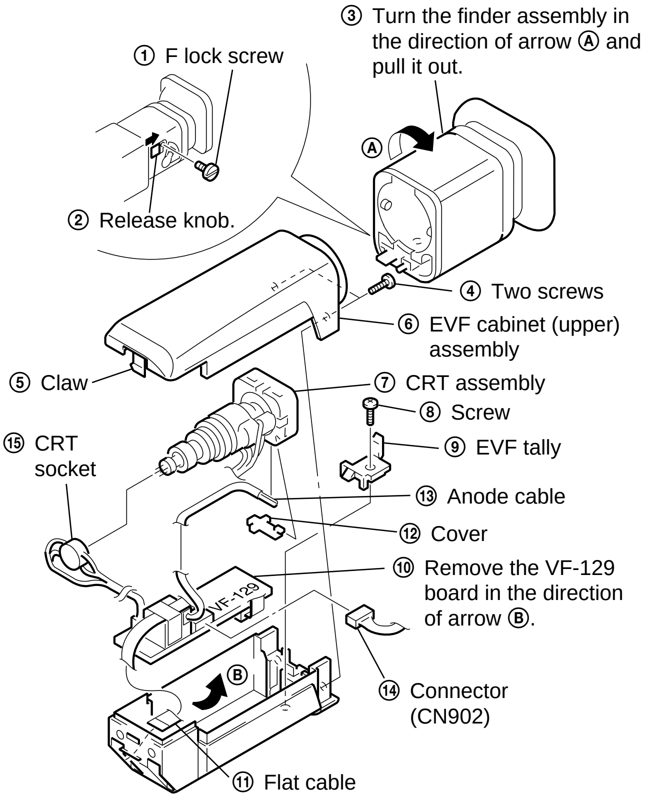
2-7. EVF BLOCK


⑤ EVF block
③ Screw
④ Claw
② Screw
① Flat cable
CN005 ... TR model
CN007 ... TRV model

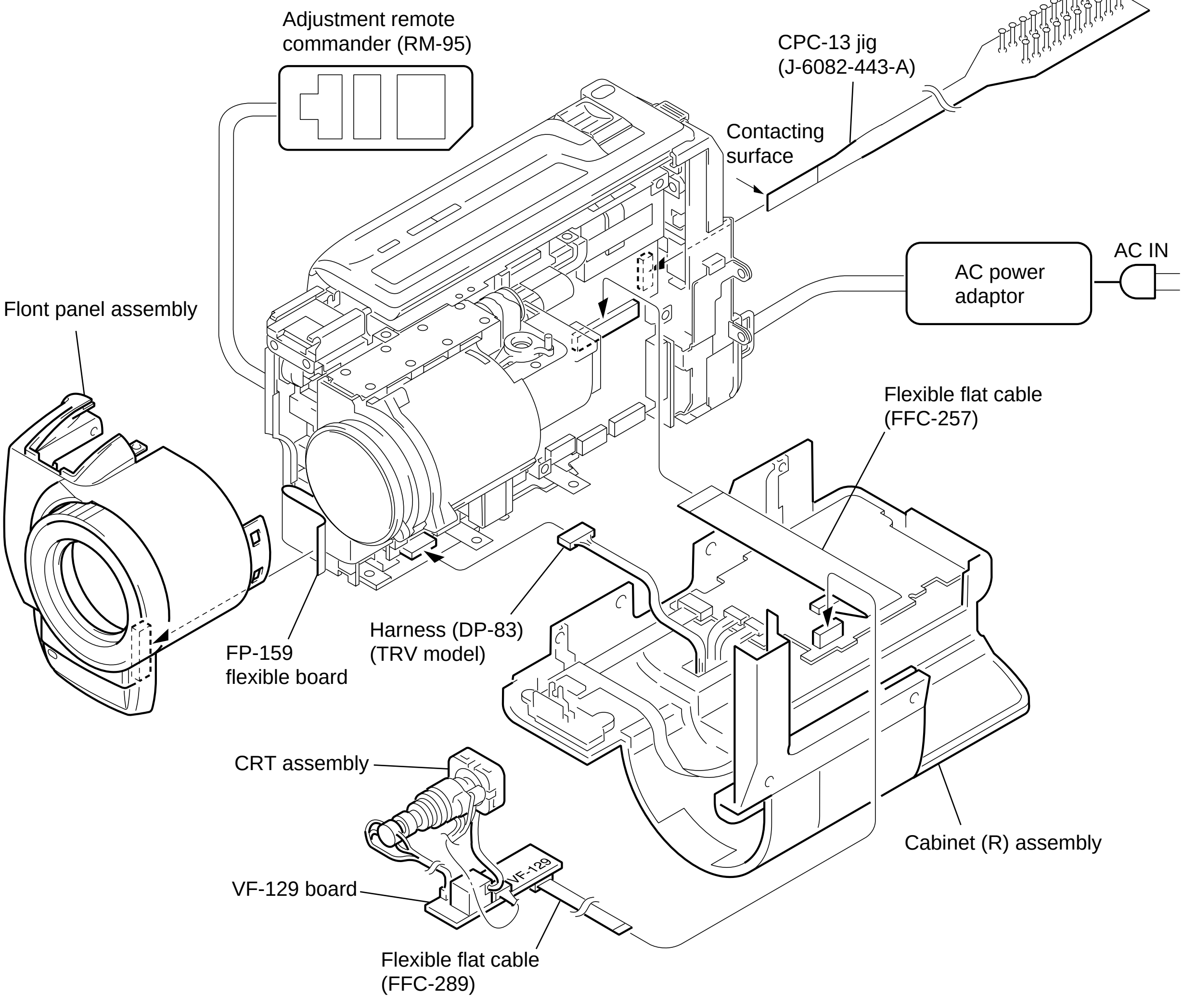
2-8. EVF ASSEMBLY


⑦ EVF assembly
⑥ Two screws
⑤ Rotate the VF hinge assembly.
① Harness guide
④ Flat cable
③ VF base assembly
② Two screws (2 × 4)

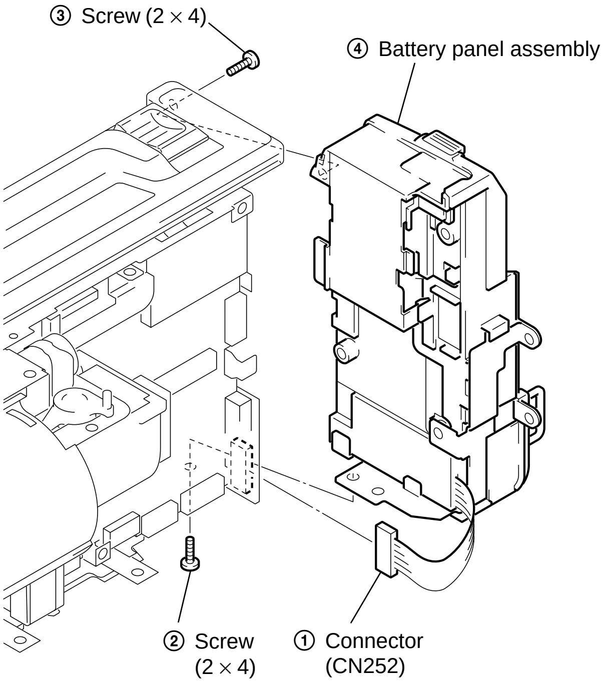
2-9. VF-129 BOARD, CRT ASSEMBLY


③ Turn the finder assembly in the direction of arrow Ⓐ and pull it out.
① F lock screw
Ⓐ
② Release knob.
④ Two screws
⑥ EVF cabinet (upper) assembly
⑤ Claw
⑦ CRT assembly
⑧ Screw
⑮ CRT socket
⑨ EVF tally
⑬ Anode cable
⑫ Cover
⑩ Remove the VF-129 board in the direction of arrow Ⓑ.
VF-129
Ⓑ
⑭ Connector (CN902)
⑪ Flat cable

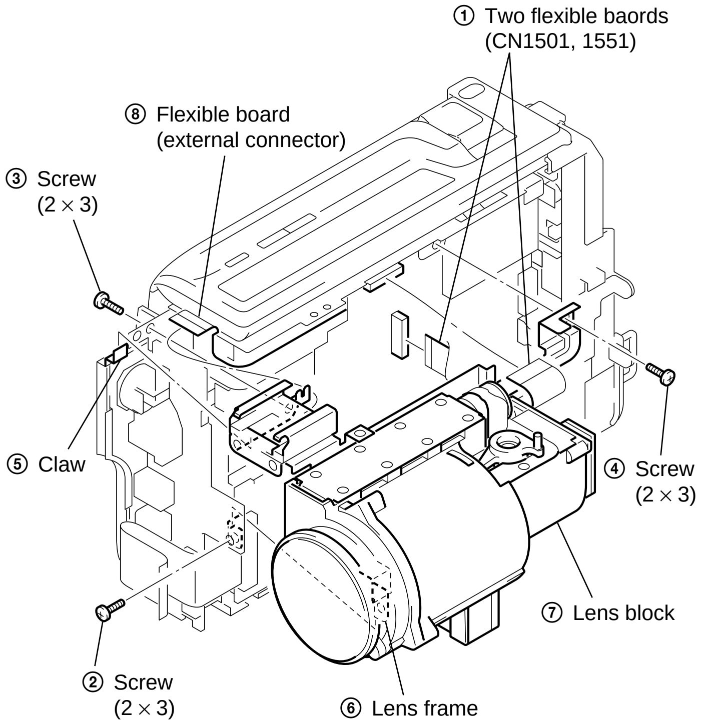
[EVF SERVICE POSITION]


Adjustment remote commander (RM-95)
CPC-13 jig (J-6082-443-A)
Contacting surface
AC IN
AC power adaptor
Flont panel assembly
Flexible flat cable (FFC-257)
FP-159 flexible board
Harness (DP-83) (TRV model)
CRT assembly
VF-129 board
VF-129
Cabinet (R) assembly
Flexible flat cable (FFC-289)

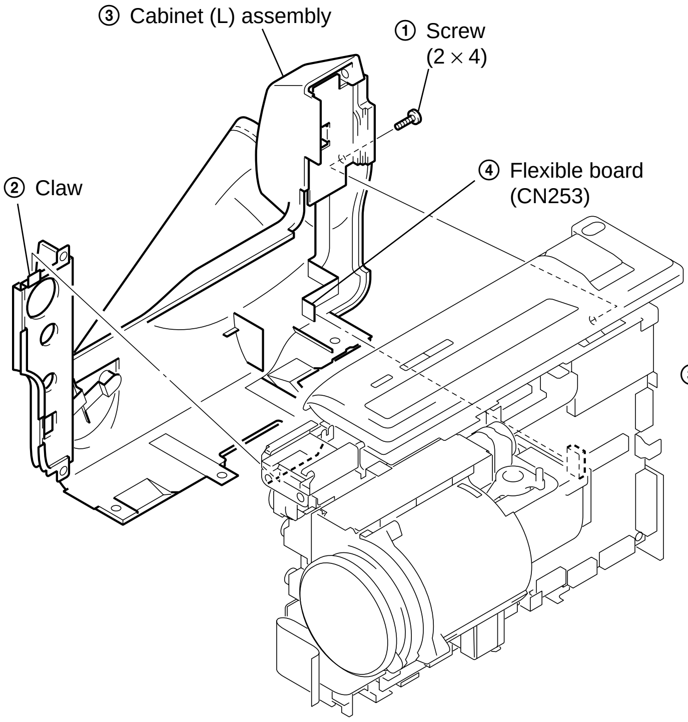
2-10. BATTERY PANEL ASSEMBLY


③ Screw (2 × 4)
④ Battery panel assembly
② Screw
(2 × 4)
① Connector
(CN252)

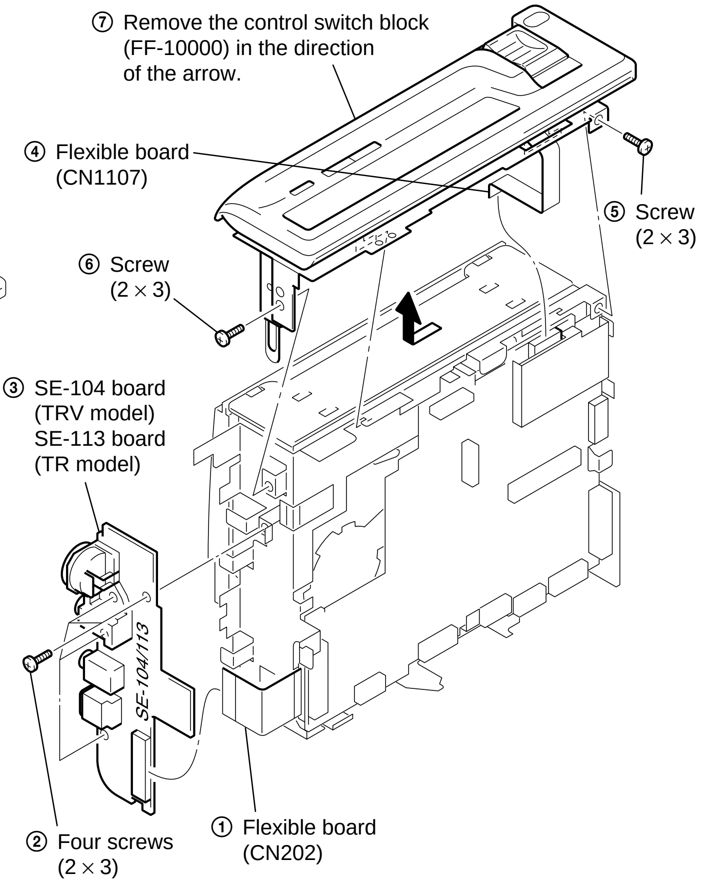
2-12. LENS BLOCK


① Two flexible baords
(CN1501, 1551)
⑧ Flexible board
(external connector)
③ Screw
(2 × 3)
⑤ Claw
④ Screw
(2 × 3)
⑦ Lens block
② Screw
(2 × 3)
⑥ Lens frame

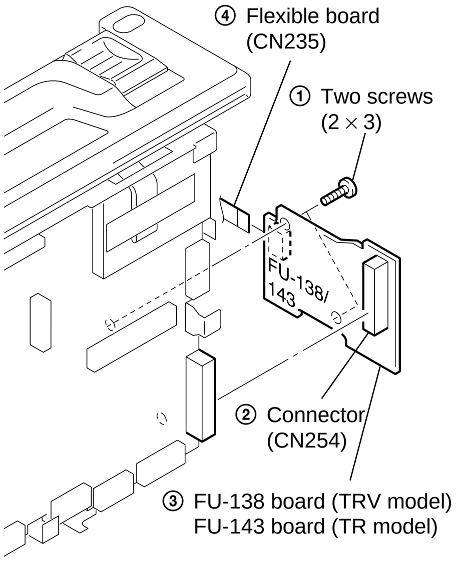
2-11. CABINET (L) ASSEMBLY


③ Cabinet (L) assembly
① Screw
(2 × 4)
② Claw
④ Flexible board
(CN253)

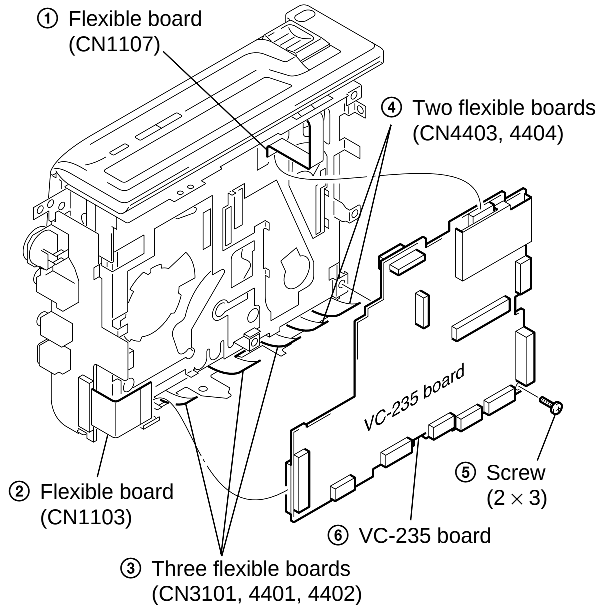
2-13. CONTROL SWITCH BLOCK (FK-10000)


⑦ Remove the control switch block
(FF-10000) in the direction
of the arrow.
④ Flexible board
(CN1107)
⑤ Screw
(2 × 3)
⑥ Screw
(2 × 3)
③ SE-104 board
(TRV model)
SE-113 board
(TR model)
SE-104/113
② Four screws
(2 × 3)
① Flexible board
(CN202)

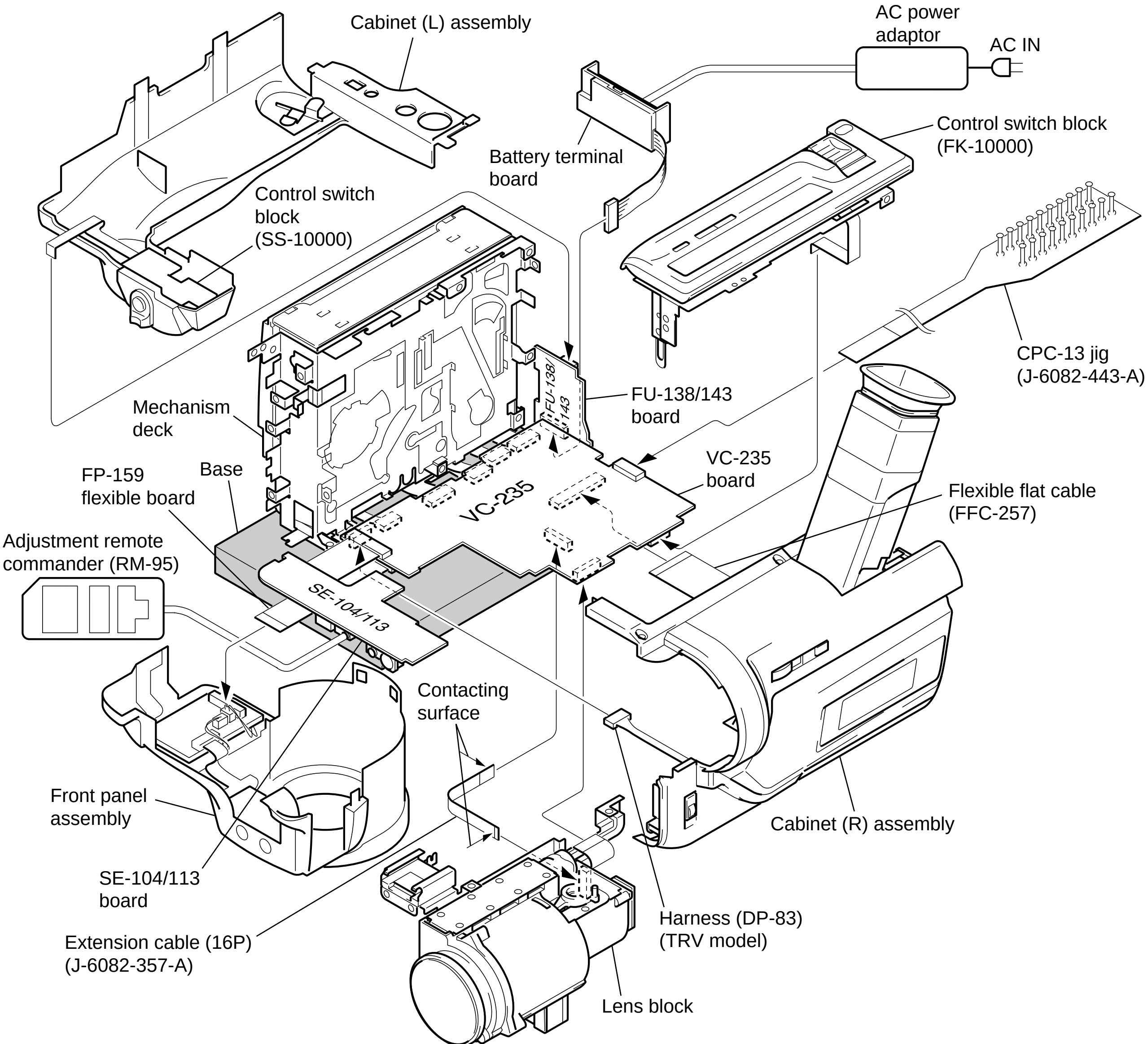
2-14. FU-138/143 BOARD


④ Flexible board
(CN235)
① Two screws
(2 × 3)
FU-138/
143
② Connector
(CN254)
③ FU-138 board (TRV model)
FU-143 board (TR model)

2-15. VC-235 BOARD

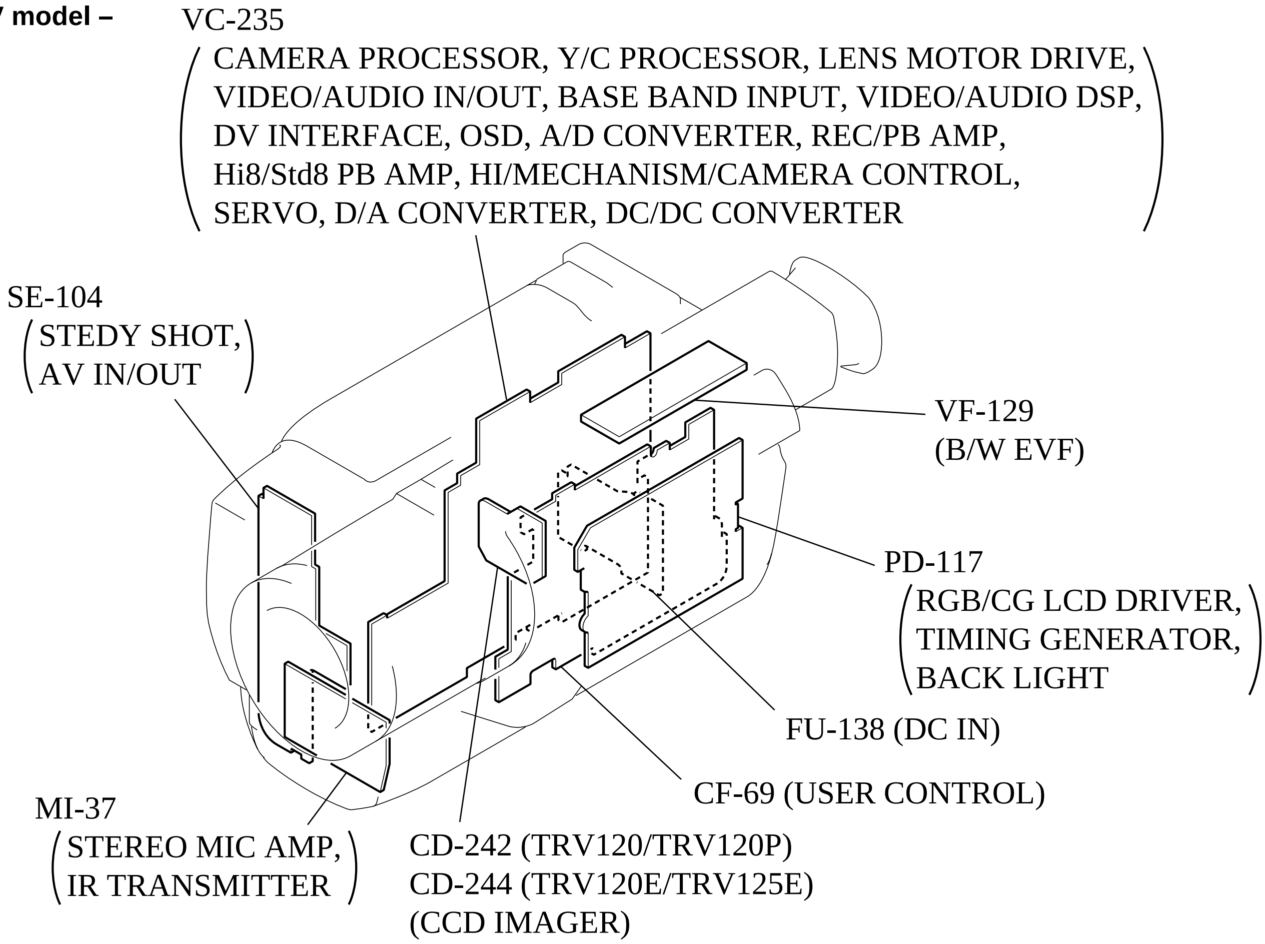

① Flexible board
(CN1107)
④ Two flexible boards
(CN4403, 4404)
VC-235 board
⑤ Screw
(2 × 3)
② Flexible board
(CN1103)
⑥ VC-235 board
③ Three flexible boards
(CN3101, 4401, 4402)

[MECHANISM DECK, VC-235 BOARD SERVICE POSITION]

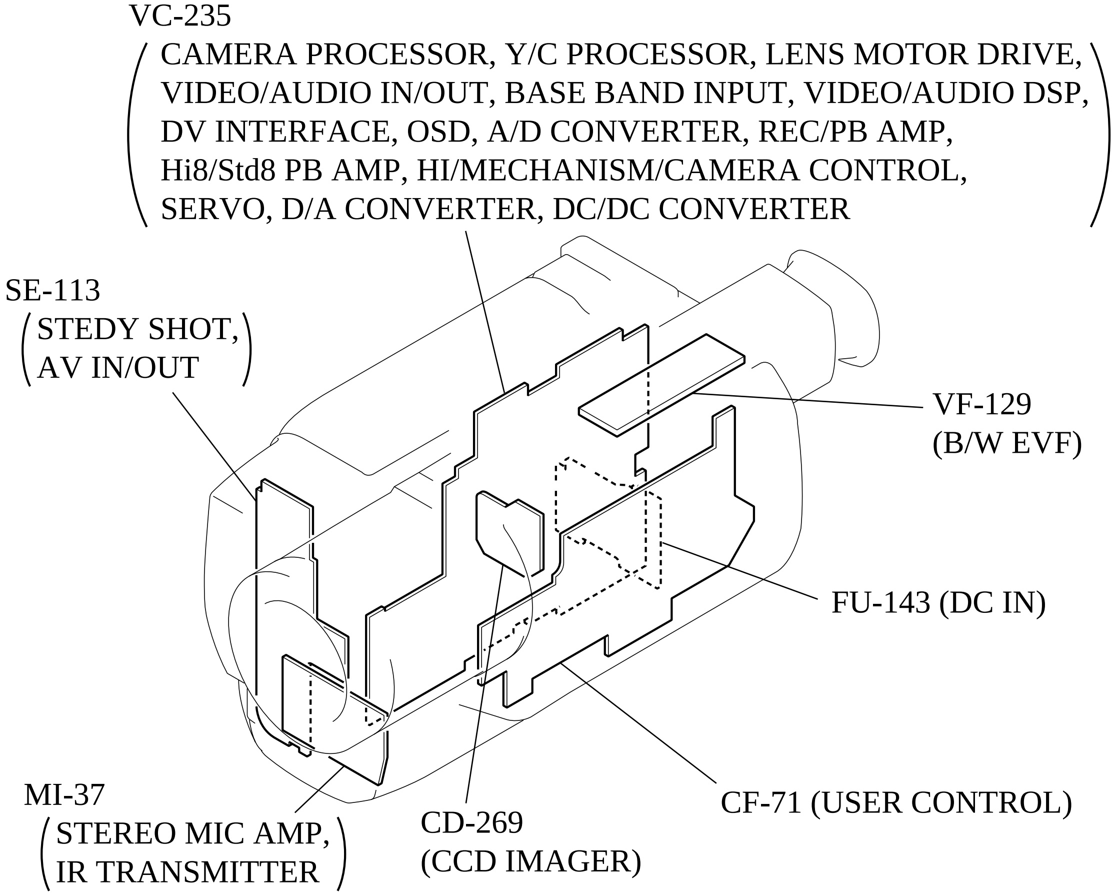

Cabinet (L) assembly
AC power
adaptor
AC IN
Control switch block
(FK-10000)
Battery terminal
board
Control switch
block
(SS-10000)
CPC-13 jig
(J-6082-443-A)
FU-138/
143
FU-138/143
board
Mechanism
deck
VC-235
board
FP-159
flexible board
Base
VC-235
Flexible flat cable
(FFC-257)
Adjustment remote
commander (RM-95)
SE-104/113
Contacting
surface
Front panel
assembly
Cabinet (R) assembly
SE-104/113
board
Harness (DP-83)
(TRV model)
Extension cable (16P)
(J-6082-357-A)
Lens block

2-16. CIRCUIT BOARDS LOCATION

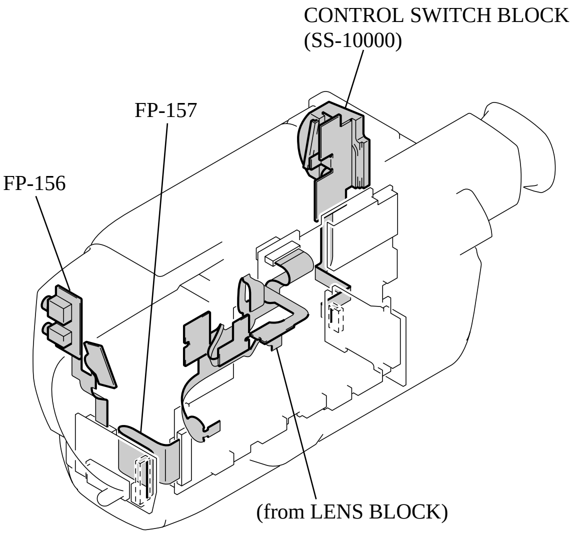
– TRV model –

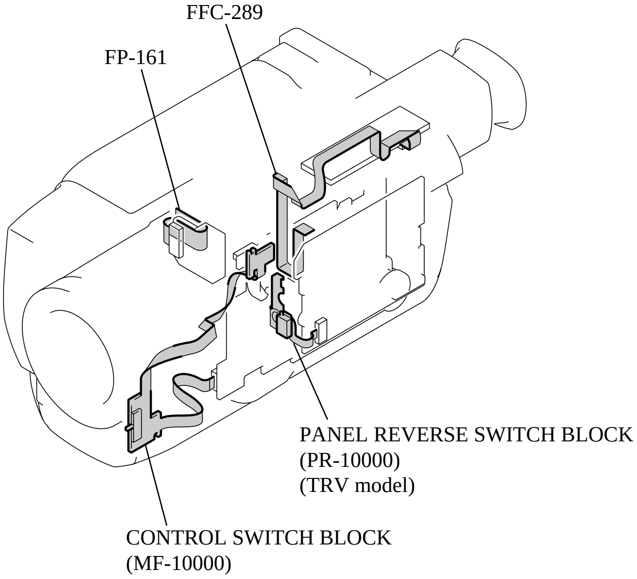

VC-235
(CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER)
SE-104
(STEDY SHOT, AV IN/OUT)
VF-129
(B/W EVF)
PD-117
(RGB/CG LCD DRIVER, TIMING GENERATOR, BACK LIGHT)
FU-138 (DC IN)
CF-69 (USER CONTROL)
MI-37
(STEREO MIC AMP, IR TRANSMITTER)
CD-242 (TRV120/TRV120P)
CD-244 (TRV120E/TRV125E)
(CCD IMAGER)

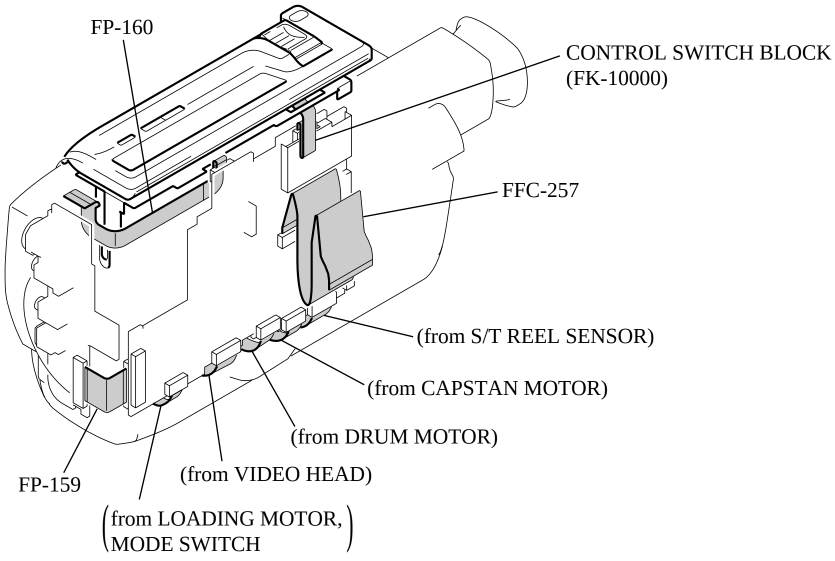
– TR model –


VC-235
(CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER)
SE-113
(STEDY SHOT, AV IN/OUT)
VF-129
(B/W EVF)
FU-143 (DC IN)
CF-71 (USER CONTROL)
MI-37
(STEREO MIC AMP, IR TRANSMITTER)
CD-269
(CCD IMAGER)

2-17. FLEXIBLE BOARDS LOCATION

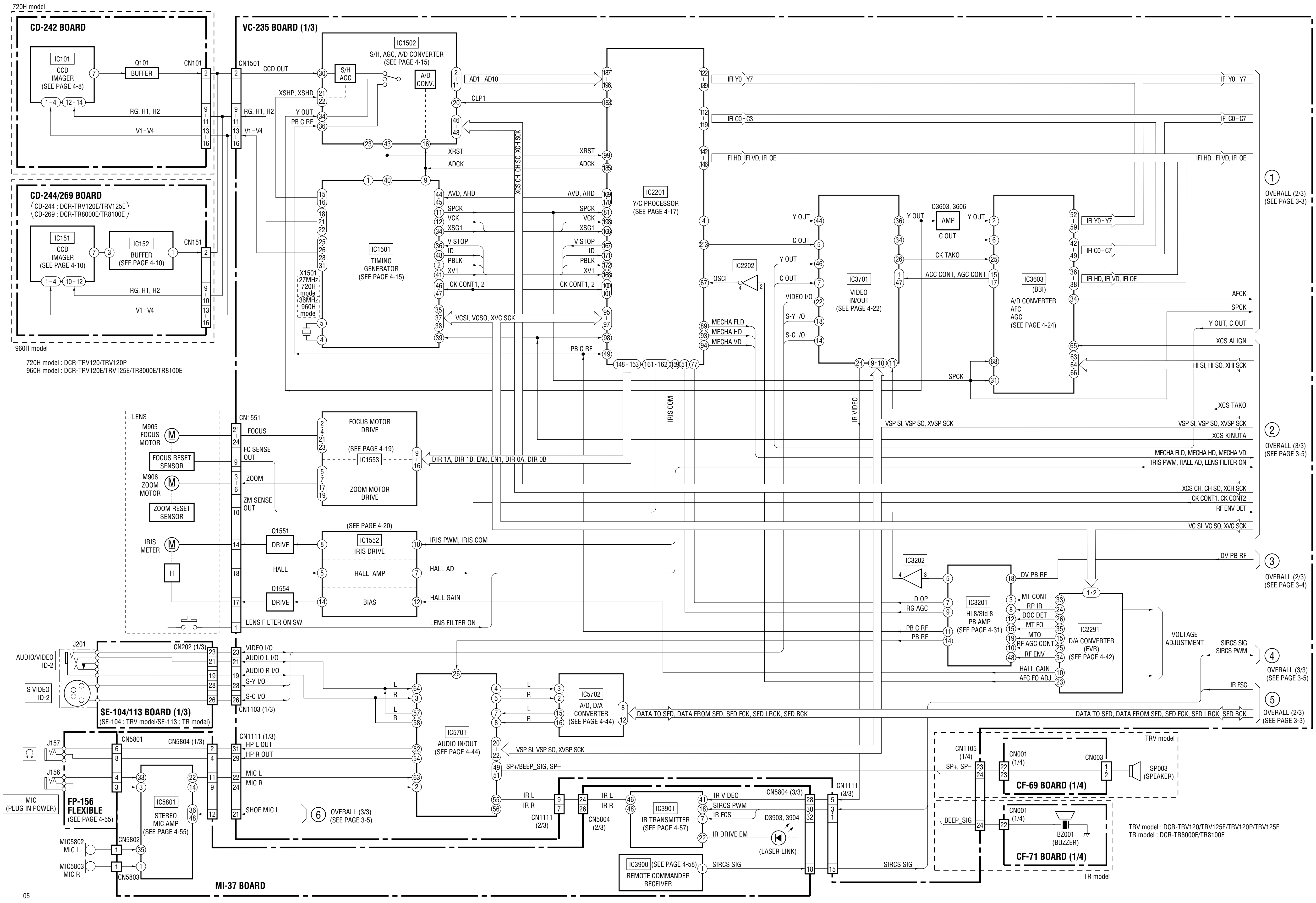

CONTROL SWITCH BLOCK
(SS-10000)
FP-157
FP-156
(from LENS BLOCK)


FFC-289
FP-161
PANEL REVERSE SWITCH BLOCK
(PR-10000)
(TRV model)
CONTROL SWITCH BLOCK
(MF-10000)

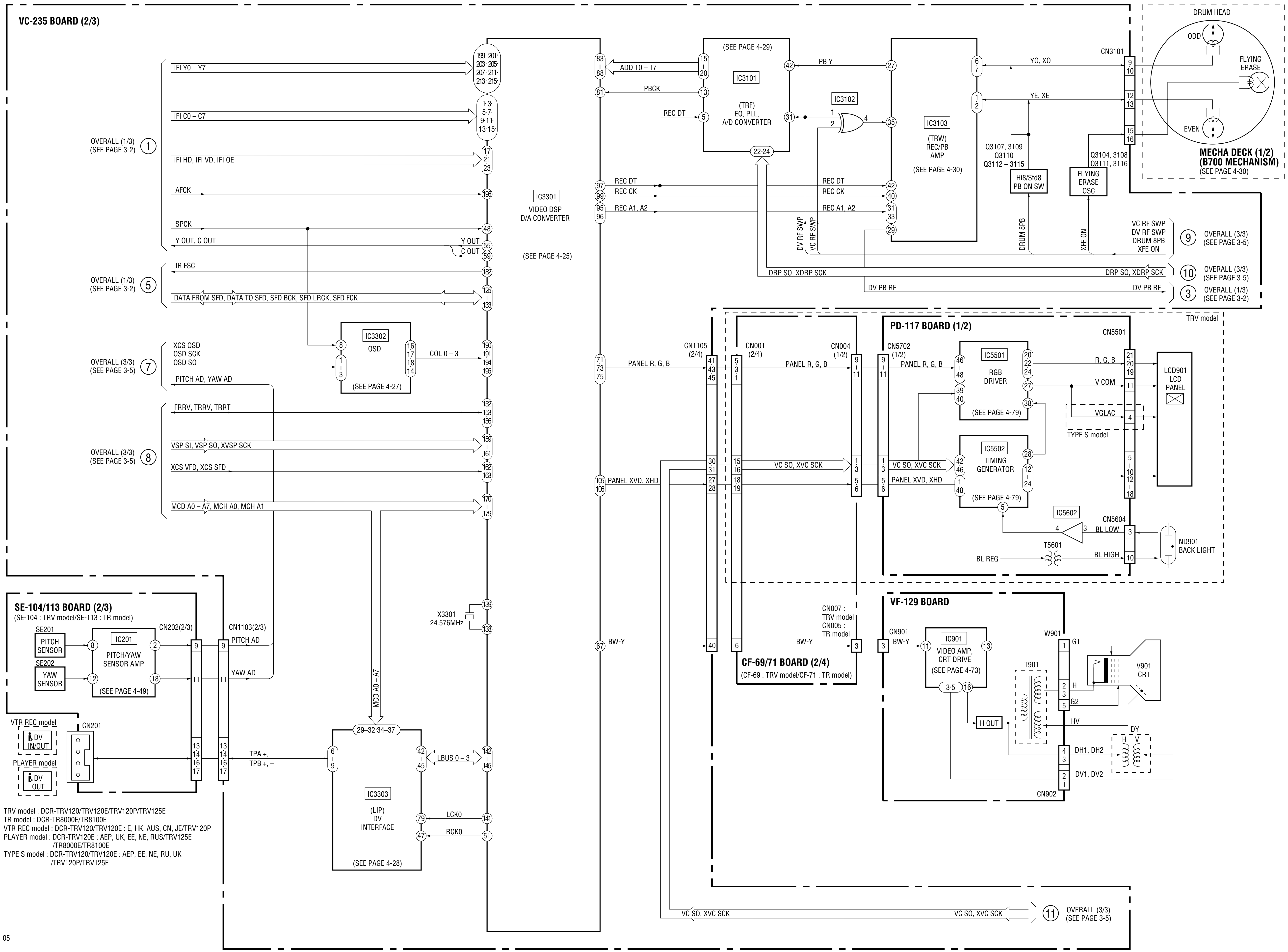

FP-160
CONTROL SWITCH BLOCK
(FK-10000)
FFC-257
(from S/T REEL SENSOR)
(from CAPSTAN MOTOR)
(from DRUM MOTOR)
(from VIDEO HEAD)
FP-159
(from LOADING MOTOR, MODE SWITCH)

SECTION 3
BLOCK DIAGRAMS

3-1. OVERALL BLOCK DIAGRAM 1


720H model
CD-242 BOARD
IC101
CCD IMAGER
(SEE PAGE 4-8)
Q101
BUFFER
CN101
RG, H1, H2
V1-V4
CD-244/269 BOARD
CD-244 : DCR-TRV120E/TRV125E
CD-269 : DCR-TR8000E/TR8100E
IC151
CCD IMAGER
(SEE PAGE 4-10)
IC152
BUFFER
(SEE PAGE 4-10)
CN151
960H model
720H model : DCR-TRV120/TRV120P
960H model : DCR-TRV120E/TRV125E/TR8000E/TR8100E
VC-235 BOARD (1/3)
CN1501
CCD OUT
XSHP, XSHD
Y OUT
PB C RF
IC1502
S/H, AGC, A/D CONVERTER
(SEE PAGE 4-15)
S/H AGC
A/D CONV.
AD1-AD10
CLP1
XRST
ADCK
XCS CH, CH SO, XCH SCK
IC1501
TIMING GENERATOR
(SEE PAGE 4-15)
X1501
27MHz 720H model
36MHz 960H model
AVD, AHD
SPCK
VCK
XSG1
V STOP
ID
PBLK
XV1
CK CONT1, 2
VCSI, VCSO, XVC SCK
PB C RF
IC2201
Y/C PROCESSOR
(SEE PAGE 4-17)
IC2202
OSCI
MECHA FLD
MECHA HD
MECHA VD
IRIS COM
IFI Y0-Y7
IFI C0-C3
IFI C0-C7
IFI HD, IFI VD, IFI OE
IC3701
VIDEO IN/OUT
(SEE PAGE 4-22)
Y OUT
C OUT
VIDEO I/O
S-Y I/O
S-C I/O
IR VIDEO
Q3603, 3606
AMP
CK TAKO
ACC CONT, AGC CONT
IC3603
(BBI)
A/D CONVERTER
AFC
AGC
(SEE PAGE 4-24)
AFCK
SPCK
Y OUT, C OUT
XCS ALIGN
HI SI, HI SO, XHI SCK
XCS TAKO
VSP SI, VSP SO, XVSP SCK
XCS KINUTA
MECHA FLD, MECHA HD, MECHA VD
IRIS PWM, HALL AD, LENS FILTER ON
XCS CH, CH SO, XCH SCK
CK CONT1, CK CONT2
RF ENV DET
VC SI, VC SO, XVC SCK
DV PB RF
① OVERALL (2/3) (SEE PAGE 3-3)
② OVERALL (3/3) (SEE PAGE 3-5)
③ OVERALL (2/3) (SEE PAGE 3-4)
④ OVERALL (3/3) (SEE PAGE 3-5)
⑤ OVERALL (2/3) (SEE PAGE 3-3)
LENS
M905 FOCUS MOTOR
FOCUS RESET SENSOR
M906 ZOOM MOTOR
ZOOM RESET SENSOR
IRIS METER
H
CN1551
FOCUS
FC SENSE OUT
ZOOM
ZM SENSE OUT
FOCUS MOTOR DRIVE
(SEE PAGE 4-19)
IC1553
ZOOM MOTOR DRIVE
DIR 1A, DIR 1B, EN0, EN1, DIR 0A, DIR 0B
(SEE PAGE 4-20)
Q1551
DRIVE
IC1552
IRIS DRIVE
IRIS PWM, IRIS COM
HALL
HALL AMP
HALL AD
Q1554
DRIVE
BIAS
HALL GAIN
LENS FILTER ON SW
LENS FILTER ON
IC3202
IC3201
Hi 8/Std 8 PB AMP
(SEE PAGE 4-31)
D OP
RG AGC
PB C RF
PB RF
MT CONT
RP IR
DOC DET
MT FO
MTQ
RF AGC CONT
RF ENV
HALL GAIN
AFC FO ADJ
IC2291
D/A CONVERTER (EVR)
(SEE PAGE 4-42)
VOLTAGE ADJUSTMENT
SIRCS SIG
SIRCS PWM
IR FSC
J201
AUDIO/VIDEO ID-2
S VIDEO ID-2
CN202 (1/3)
SE-104/113 BOARD (1/3)
(SE-104 : TRV model/SE-113 : TR model)
VIDEO I/O
AUDIO L I/O
AUDIO R I/O
S-Y I/O
S-C I/O
CN1103 (1/3)
IC5701
AUDIO IN/OUT
(SEE PAGE 4-44)
IC5702
A/D, D/A CONVERTER
(SEE PAGE 4-44)
DATA TO SFD, DATA FROM SFD, SFD FCK, SFD LRCK, SFD BCK
VSP SI, VSP SO, XVSP SCK
SP+/BEEP_SIG, SP-
CN1111 (1/3)
HP L OUT
HP R OUT
MIC L
MIC R
SHOE MIC L
⑥ OVERALL (3/3) (SEE PAGE 3-5)
J157
J156
MIC (PLUG IN POWER)
FP-156 FLEXIBLE
(SEE PAGE 4-55)
CN5801
CN5804 (1/3)
IC5801
STEREO MIC AMP
(SEE PAGE 4-55)
CN5802
MIC5802 MIC L
MIC5803 MIC R
CN5803
MI-37 BOARD
IR L
IR R
CN1111 (2/3)
CN5804 (2/3)
IC3901
IR TRANSMITTER
(SEE PAGE 4-57)
IR VIDEO
SIRCS PWM
IR FCS
IR DRIVE EM
D3903, 3904
(LASER LINK)
CN5804 (3/3)
CN1111 (3/3)
IC3900 (SEE PAGE 4-58)
REMOTE COMMANDER RECEIVER
SIRCS SIG
TRV model
CN1105 (1/4)
SP+, SP-
CN001 (1/4)
CN003
CF-69 BOARD (1/4)
SP003 (SPEAKER)
BEEP_SIG
CN001 (1/4)
BZ001 (BUZZER)
CF-71 BOARD (1/4)
TR model
TRV model : DCR-TRV120/TRV125E/TRV120P/TRV125E
TR model : DCR-TR8000E/TR8100E
05

3-2. OVERALL BLOCK DIAGRAM 2

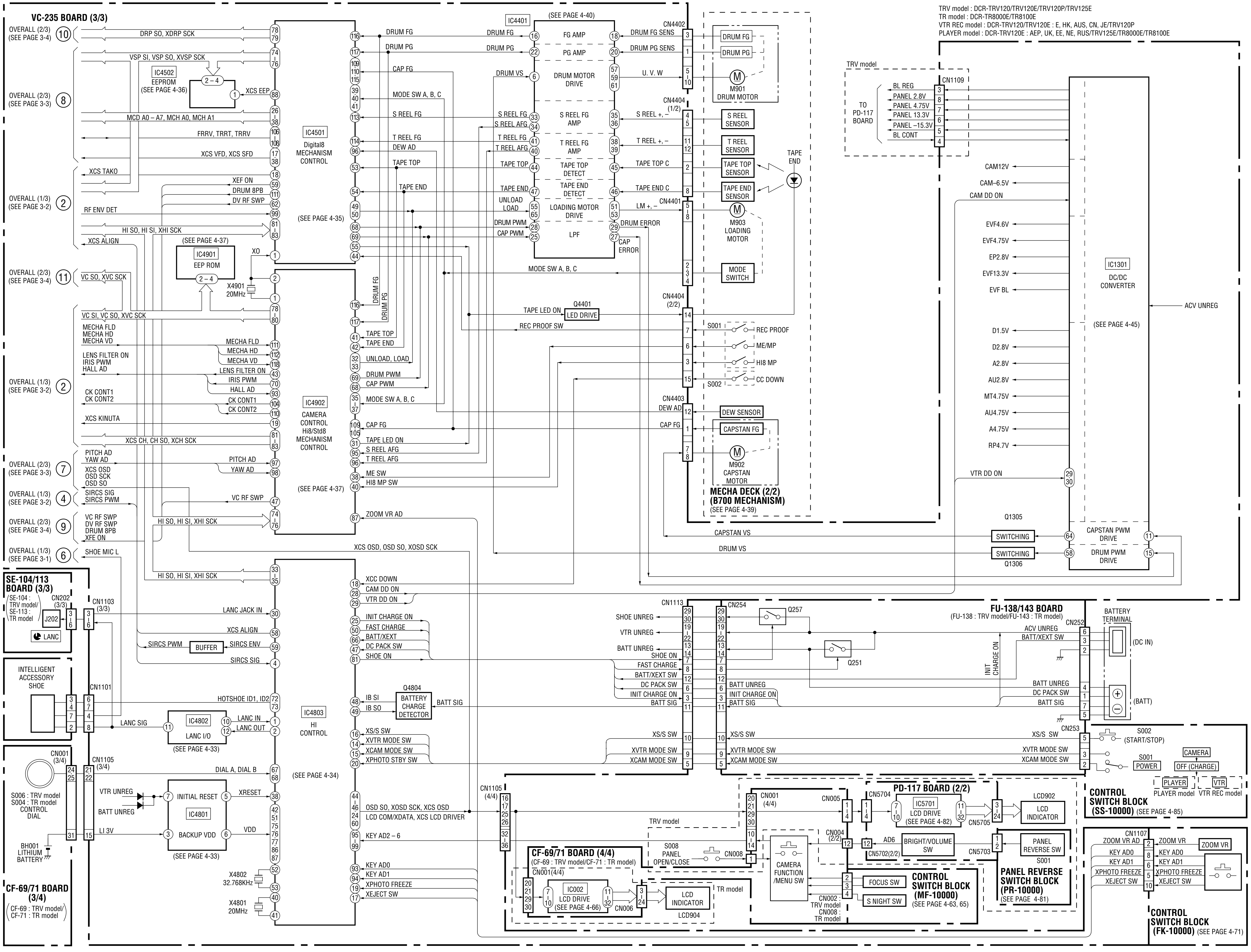

VC-235 BOARD (2/3)
IFI Y0 – Y7
IFI C0 – C7
IFI HD, IFI VD, IFI OE
AFCK
SPCK
Y OUT, C OUT
OVERALL (1/3) (SEE PAGE 3-2) ①
IR FSC
DATA FROM SFD, DATA TO SFD, SFD BCK, SFD LRCK, SFD FCK
OVERALL (1/3) (SEE PAGE 3-2) ⑤
XCS OSD
OSD SCK
OSD SO
PITCH AD, YAW AD
OVERALL (3/3) (SEE PAGE 3-5) ⑦
FRRV, TRRV, TRRT
VSP SI, VSP SO, XVSP SCK
XCS VFD, XCS SFD
MCD A0 – A7, MCH A0, MCH A1
OVERALL (3/3) (SEE PAGE 3-5) ⑧
IC3302 OSD (SEE PAGE 4-27)
COL 0 – 3
IC3301 VIDEO DSP D/A CONVERTER (SEE PAGE 4-25)
Y OUT
C OUT
ADD T0 – T7
PBCK
REC DT
REC CK
REC A1, A2
PANEL R, G, B
PANEL XVD, XHD
BW-Y
X3301 24.576MHz
IC3101 (TRF) EQ, PLL, A/D CONVERTER (SEE PAGE 4-29)
IC3102
PB Y
IC3103 (TRW) REC/PB AMP (SEE PAGE 4-30)
DV RF SWP
VC RF SWP
DRP SO, XDRP SCK
DV PB RF
CN3101
YO, XO
YE, XE
Q3107, 3109 Q3110 Q3112 – 3115
Hi8/Std8 PB ON SW
Q3104, 3108 Q3111, 3116
FLYING ERASE OSC
DRUM 8PB
XFE ON
DRUM HEAD
ODD
EVEN
FLYING ERASE
MECHA DECK (1/2) (B700 MECHANISM) (SEE PAGE 4-30)
VC RF SWP
DV RF SWP
DRUM 8PB
XFE ON
OVERALL (3/3) (SEE PAGE 3-5) ⑨
DRP SO, XDRP SCK
OVERALL (3/3) (SEE PAGE 3-5) ⑩
DV PB RF
OVERALL (1/3) (SEE PAGE 3-2) ③
TRV model
CN1105 (2/4)
CN001 (2/4)
CN004 (1/2)
CN5702 (1/2)
PD-117 BOARD (1/2)
IC5501 RGB DRIVER (SEE PAGE 4-79)
IC5502 TIMING GENERATOR (SEE PAGE 4-79)
VC SO, XVC SCK
CN5501
R, G, B
V COM
VGLAC
TYPE S model
LCD901 LCD PANEL
IC5602
BL LOW
CN5604
T5601
BL REG
BL HIGH
ND901 BACK LIGHT
CN007 : TRV model CN005 : TR model
CF-69/71 BOARD (2/4) (CF-69 : TRV model/CF-71 : TR model)
VF-129 BOARD
CN901
IC901 VIDEO AMP, CRT DRIVE (SEE PAGE 4-73)
W901
G1
T901
H
G2
H OUT
HV
V901 CRT
DY
H V
DH1, DH2
DV1, DV2
CN902
SE-104/113 BOARD (2/3) (SE-104 : TRV model/SE-113 : TR model)
SE201 PITCH SENSOR
SE202 YAW SENSOR
IC201 PITCH/YAW SENSOR AMP (SEE PAGE 4-49)
CN202(2/3)
CN1103(2/3)
PITCH AD
YAW AD
VTR REC model
DV IN/OUT
PLAYER model
DV OUT
CN201
TPA +, –
TPB +, –
MCD A0 – A7
IC3303 (LIP) DV INTERFACE (SEE PAGE 4-28)
LBUS 0 – 3
LCK0
RCK0
VC SO, XVC SCK
OVERALL (3/3) (SEE PAGE 3-5) ⑪

TRV model : DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model : DCR-TR8000E/TR8100E
VTR REC model : DCR-TRV120/TRV120E : E, HK, AUS, CN, JE/TRV120P
PLAYER model : DCR-TRV120E : AEP, UK, EE, NE, RUS/TRV125E
/TR8000E/TR8100E
TYPE S model : DCR-TRV120/TRV120E : AEP, EE, NE, RU, UK
/TRV120P/TRV125E

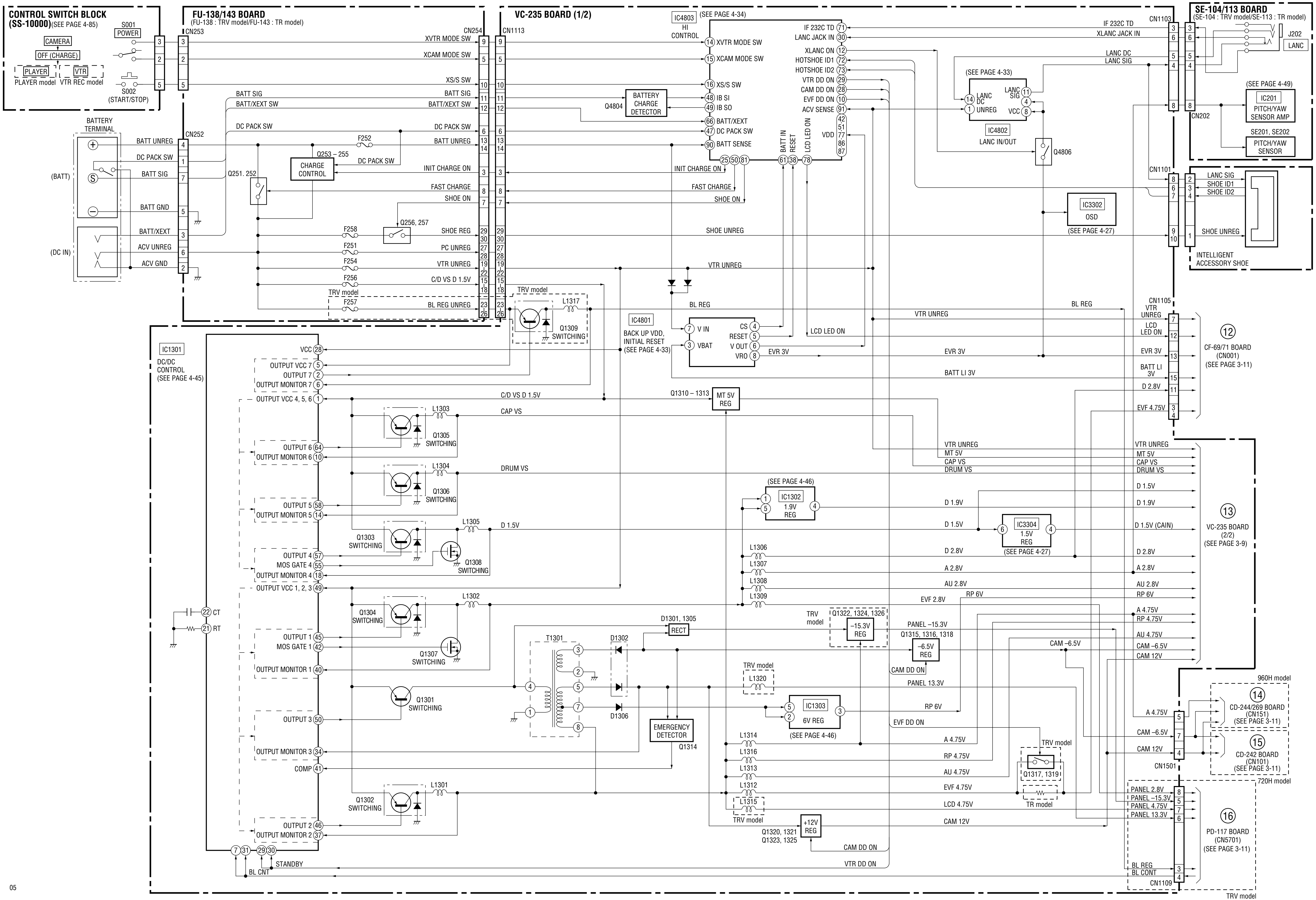
05

3-3. OVERALL BLOCK DIAGRAM 3

TRV model : DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model : DCR-TR8000E/TR8100E
VTR REC model : DCR-TRV120/TRV120E : E, HK, AUS, CN, JE/TRV120P
PLAYER model : DCR-TRV120E : AEP, UK, EE, NE, RUS/TRV125E/TR8000E/TR8100E


VC-235 BOARD (3/3)
OVERALL (2/3) (SEE PAGE 3-4) 10
DRP SO, XDRP SCK
VSP SI, VSP SO, XVSP SCK
IC4502 EEPROM (SEE PAGE 4-36)
XCS EEP
OVERALL (2/3) (SEE PAGE 3-3) 8
MCD A0 – A7, MCH A0, MCH A1
FRRV, TRRT, TRRV
XCS VFD, XCS SFD
XCS TAKO
XEF ON
DRUM 8PB
DV RF SWP
OVERALL (1/3) (SEE PAGE 3-2) 2
RF ENV DET
HI SO, HI SI, XHI SCK
XCS ALIGN
IC4501 Digital8 MECHANISM CONTROL (SEE PAGE 4-35)
IC4901 EEP ROM (SEE PAGE 4-37)
XO
X4901 20MHz
OVERALL (2/3) (SEE PAGE 3-4) 11
VC SO, XVC SCK
VC SI, VC SO, XVC SCK
MECHA FLD
MECHA HD
MECHA VD
LENS FILTER ON
IRIS PWM
HALL AD
OVERALL (1/3) (SEE PAGE 3-2) 2
CK CONT1
CK CONT2
XCS KINUTA
XCS CH, CH SO, XCH SCK
PITCH AD
YAW AD
XCS OSD
OSD SCK
OSD SO
OVERALL (2/3) (SEE PAGE 3-3) 7
SIRCS SIG
SIRCS PWM
OVERALL (1/3) (SEE PAGE 3-2) 4
VC RF SWP
DV RF SWP
DRUM 8PB
XFE ON
OVERALL (2/3) (SEE PAGE 3-4) 9
OVERALL (1/3) (SEE PAGE 3-1) 6
SHOE MIC L
IC4902 CAMERA CONTROL Hi8/Std8 MECHANISM CONTROL (SEE PAGE 4-37)
DRUM FG
DRUM PG
CAP FG
MODE SW A, B, C
S REEL FG
T REEL FG
DEW AD
TAPE TOP
TAPE END
UNLOAD, LOAD
DRUM PWM
CAP PWM
TAPE LED ON
S REEL AFG
T REEL AFG
ME SW
HI8 MP SW
ZOOM VR AD
XCS OSD, OSD SO, XOSD SCK
IC4401 (SEE PAGE 4-40)
FG AMP
PG AMP
DRUM MOTOR DRIVE
S REEL FG AMP
T REEL FG AMP
TAPE TOP DETECT
TAPE END DETECT
LOADING MOTOR DRIVE
LPF
UNLOAD
LOAD
DRUM VS
DRUM FG SENS
DRUM PG SENS
U, V, W
S REEL +, –
T REEL +, –
TAPE TOP C
TAPE END C
LM +, –
DRUM ERROR
CAP ERROR
CN4402
CN4404 (1/2)
CN4401
CN4404 (2/2)
CN4403
Q4401 LED DRIVE
REC PROOF SW
DRUM FG
DRUM PG
M901 DRUM MOTOR
S REEL SENSOR
T REEL SENSOR
TAPE TOP SENSOR
TAPE END SENSOR
TAPE END
M903 LOADING MOTOR
MODE SWITCH
S001 REC PROOF
ME/MP
HI8 MP
S002 CC DOWN
DEW SENSOR
CAPSTAN FG
M902 CAPSTAN MOTOR
MECHA DECK (2/2) (B700 MECHANISM) (SEE PAGE 4-39)
TRV model
TO PD-117 BOARD
CN1109
BL REG
PANEL 2.8V
PANEL 4.75V
PANEL 13.3V
PANEL –15.3V
BL CONT
CAM12V
CAM–6.5V
CAM DD ON
EVF4.6V
EVF4.75V
EP2.8V
EVF13.3V
EVF BL
IC1301 DC/DC CONVERTER (SEE PAGE 4-45)
ACV UNREG
D1.5V
D2.8V
A2.8V
AU2.8V
MT4.75V
AU4.75V
A4.75V
RP4.7V
VTR DD ON
Q1305
SWITCHING
CAPSTAN PWM DRIVE
DRUM PWM DRIVE
Q1306
CAPSTAN VS
DRUM VS
SE-104/113 BOARD (3/3)
SE-104 : TRV model/ SE-113 : TR model
CN202 (3/3)
J202
LANC
CN1103 (3/3)
INTELLIGENT ACCESSORY SHOE
CN1101
CN001 (3/4)
CN1105 (3/4)
S006 : TRV model S004 : TR model CONTROL DIAL
BH001 LITHIUM BATTERY
CF-69/71 BOARD (3/4) (CF-69 : TRV model/ CF-71 : TR model)
LANC JACK IN
XCS ALIGN
SIRCS PWM
BUFFER
SIRCS ENV
SIRCS SIG
HOTSHOE ID1, ID2
LANC SIG
IC4802 LANC I/O (SEE PAGE 4-33)
LANC IN
LANC OUT
DIAL A, DIAL B
VTR UNREG
BATT UNREG
LI 3V
IC4801 INITIAL RESET BACKUP VDD (SEE PAGE 4-33)
XRESET
VDD
X4802 32.768KHz
X4801 20MHz
IC4803 HI CONTROL (SEE PAGE 4-34)
XCC DOWN
CAM DD ON
VTR DD ON
INIT CHARGE ON
FAST CHARGE
BATT/XEXT
DC PACK SW
SHOE ON
IB SI
IB SO
Q4804 BATTERY CHARGE DETECTOR
BATT SIG
XS/S SW
XVTR MODE SW
XCAM MODE SW
XPHOTO STBY SW
OSD SO, XOSD SCK, XCS OSD
LCD COM/XDATA, XCS LCD DRIVER
KEY AD2 – 6
KEY AD0
KEY AD1
XPHOTO FREEZE
XEJECT SW
CN1113
SHOE UNREG
VTR UNREG
BATT UNREG
CN254
Q257
Q251
FU-138/143 BOARD (FU-138 : TRV model/FU-143 : TR model)
CN252
BATTERY TERMINAL
(DC IN)
(BATT)
INIT CHARGE ON
CN253
S002 (START/STOP)
S001 POWER
CAMERA
OFF (CHARGE)
PLAYER
VTR
PLAYER model
VTR REC model
CONTROL SWITCH BLOCK (SS-10000) (SEE PAGE 4-85)
CN1105 (4/4)
CF-69/71 BOARD (4/4) (CF-69 : TRV model/CF-71 : TR model)
CN001 (4/4)
IC002 LCD DRIVE (SEE PAGE 4-66)
CN006
LCD INDICATOR
LCD904
TR model
TRV model
S008 PANEL OPEN/CLOSE
CN008
CN001 (4/4)
CN005
CN004 (2/2)
CAMERA FUNCTION /MENU SW
FOCUS SW
S NIGHT SW
CN002 : TRV model CN008 : TR model
CONTROL SWITCH BLOCK (MF-10000) (SEE PAGE 4-63, 65)
PD-117 BOARD (2/2)
CN5704
IC5701 LCD DRIVE (SEE PAGE 4-82)
CN5705
LCD902
LCD INDICATOR
AD6
BRIGHT/VOLUME SW
CN5702(2/2)
CN5703
PANEL REVERSE SW
S001
PANEL REVERSE SWITCH BLOCK (PR-10000) (SEE PAGE 4-81)
CN1107
ZOOM VR AD
ZOOM VR
KEY AD0
KEY AD1
XPHOTO FREEZE
XEJECT SW
CONTROL SWITCH BLOCK (FK-10000) (SEE PAGE 4-71)
05

3-4. POWER BLOCK DIAGRAM 1

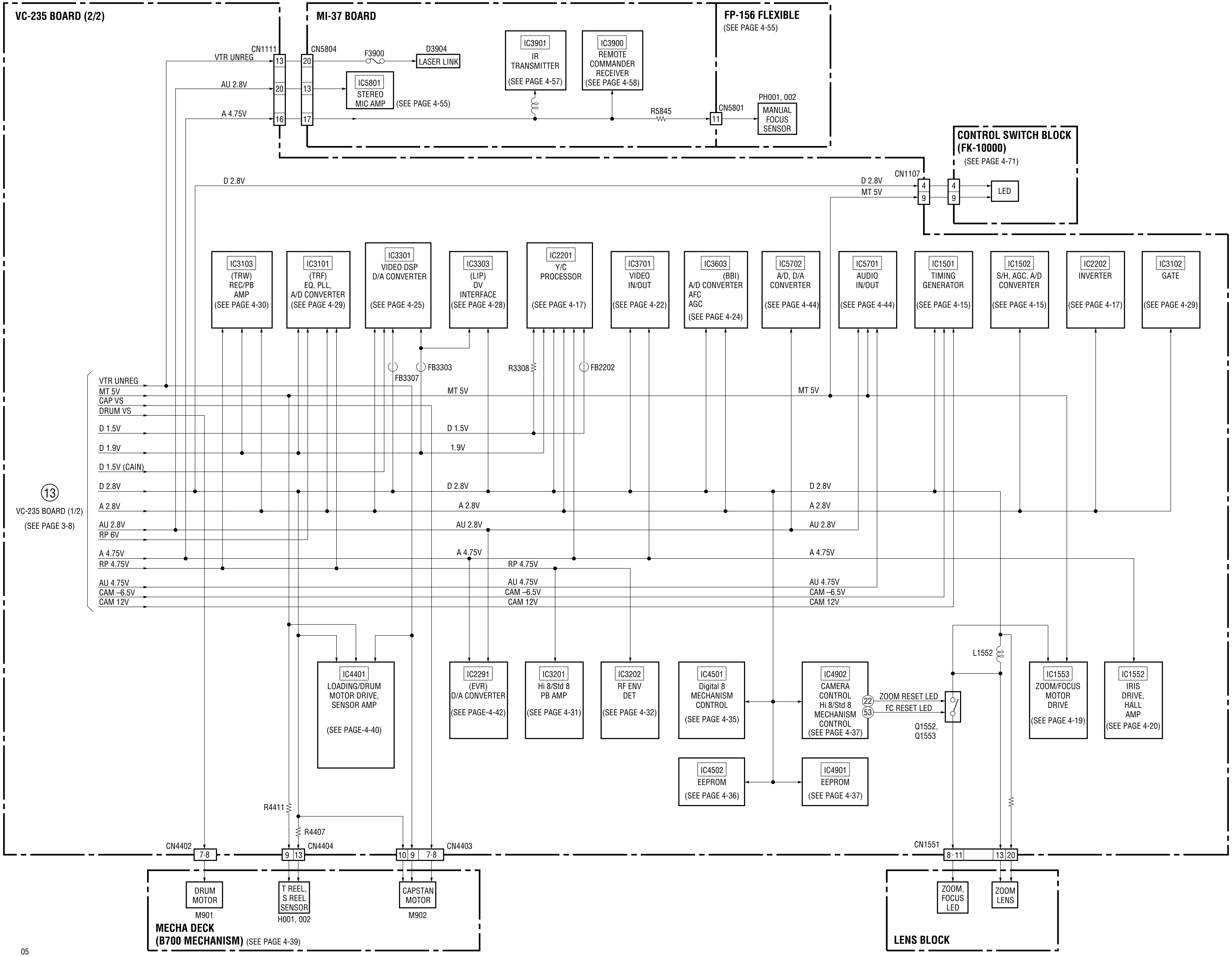

CONTROL SWITCH BLOCK
(SS-10000)(SEE PAGE 4-85)
S001
POWER
CAMERA
OFF (CHARGE)
PLAYER
VTR
PLAYER model
VTR REC model
S002
(START/STOP)
FU-138/143 BOARD
(FU-138 : TRV model/FU-143 : TR model)
CN253
CN254
CN252
VC-235 BOARD (1/2)
CN1113
IC4803
HI CONTROL
(SEE PAGE 4-34)
XVTR MODE SW
XCAM MODE SW
XS/S SW
BATT SIG
BATT/XEXT SW
DC PACK SW
BATT UNREG
INIT CHARGE ON
FAST CHARGE
SHOE ON
SHOE UNREG
PC UNREG
VTR UNREG
C/D VS D 1.5V
BL REG UNREG
BATTERY TERMINAL
(BATT)
(DC IN)
BATT GND
BATT/XEXT
ACV UNREG
ACV GND
F252
F258
F251
F254
F256
F257
TRV model
Q253 – 255
Q251, 252
Q256, 257
CHARGE CONTROL
Q4804
BATTERY CHARGE DETECTOR
IB SI
IB SO
BATT/XEXT
BATT SENSE
VDD
BATT IN
RESET
LCD LED ON
IF 232C TD
LANC JACK IN
XLANC ON
HOTSHOE ID1
HOTSHOE ID2
VTR DD ON
CAM DD ON
EVF DD ON
ACV SENSE
(SEE PAGE 4-33)
LANC DC UNREG
LANC SIG
VCC
IC4802
LANC IN/OUT
Q4806
IC3302
OSD
(SEE PAGE 4-27)
CN1103
XLANC JACK IN
LANC DC
CN1101
SHOE ID1
SHOE ID2
SE-104/113 BOARD
(SE-104 : TRV model/SE-113 : TR model)
J202
LANC
CN202
(SEE PAGE 4-49)
IC201
PITCH/YAW SENSOR AMP
SE201, SE202
PITCH/YAW SENSOR
INTELLIGENT ACCESSORY SHOE
L1317
Q1309 SWITCHING
IC4801
BACK UP VDD, INITIAL RESET
(SEE PAGE 4-33)
V IN
VBAT
CS
V OUT
VRO
EVR 3V
BATT LI 3V
BL REG
CN1105
VTR UNREG
LCD LED ON
D 2.8V
EVF 4.75V
⑫
CF-69/71 BOARD
(CN001)
(SEE PAGE 3-11)
IC1301
DC/DC CONTROL
(SEE PAGE 4-45)
VCC
OUTPUT VCC 7
OUTPUT 7
OUTPUT MONITOR 7
OUTPUT VCC 4, 5, 6
OUTPUT 6
OUTPUT MONITOR 6
OUTPUT 5
OUTPUT MONITOR 5
OUTPUT 4
MOS GATE 4
OUTPUT MONITOR 4
OUTPUT VCC 1, 2, 3
OUTPUT 1
MOS GATE 1
OUTPUT MONITOR 1
OUTPUT 3
OUTPUT MONITOR 3
COMP
OUTPUT 2
OUTPUT MONITOR 2
CT
RT
STANDBY
BL CNT
L1303
Q1305 SWITCHING
L1304
Q1306 SWITCHING
L1305
Q1303 SWITCHING
Q1308 SWITCHING
L1302
Q1304 SWITCHING
Q1307 SWITCHING
Q1301 SWITCHING
L1301
Q1302 SWITCHING
CAP VS
DRUM VS
D 1.5V
Q1310 – 1313
MT 5V REG
MT 5V
(SEE PAGE 4-46)
IC1302
1.9V REG
IC3304
1.5V REG
D 1.9V
D 1.5V (CAIN)
L1306
L1307
L1308
L1309
A 2.8V
AU 2.8V
EVF 2.8V
RP 6V
⑬
VC-235 BOARD
(2/2)
(SEE PAGE 3-9)
D1301, 1305
RECT
T1301
D1302
D1306
Q1322, 1324, 1326
–15.3V REG
PANEL –15.3V
Q1315, 1316, 1318
–6.5V REG
CAM –6.5V
CAM DD ON
PANEL 13.3V
A 4.75V
RP 4.75V
AU 4.75V
CAM 12V
L1320
IC1303
6V REG
EMERGENCY DETECTOR
Q1314
L1314
L1316
L1313
L1312
L1315
TR model
+12V REG
Q1320, 1321
Q1323, 1325
LCD 4.75V
Q1317, 1319
960H model
CN1501
⑭
CD-244/269 BOARD
(CN151)
(SEE PAGE 3-11)
⑮
CD-242 BOARD
(CN101)
(SEE PAGE 3-11)
720H model
PANEL 2.8V
PANEL –15.3V
PANEL 4.75V
PANEL 13.3V
⑯
PD-117 BOARD
(CN5701)
(SEE PAGE 3-11)
BL CONT
CN1109
VTR DD ON
05

720H model : DCR-TRV120/TRV120P
960H model : DCR-TRV120E/TRV125E/TR8000E/TR8100E

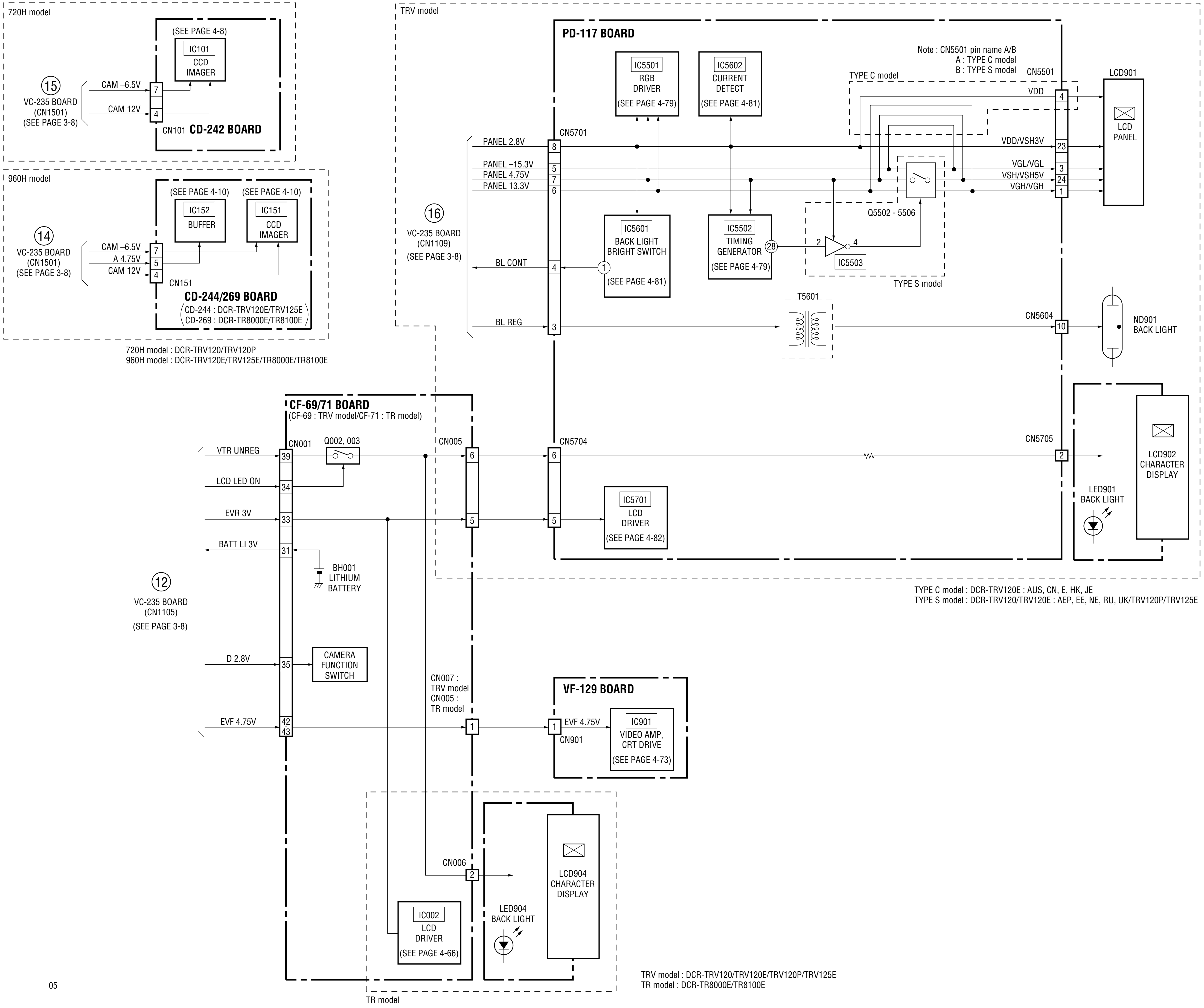
TRV model : DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model : DCR-TR8000E/TR8100E

VTR REC model : DCR-TRV120/TRV120E : E, HK, AUS, CN, JE/TRV120P
PLAYER model : DCR-TRV120E : AEP, UK, EE, NE, RUS/TRV125E/TR8000E/TR8100E

3-5. POWER BLOCK DIAGRAM 2


VC-235 BOARD (2/2)
MI-37 BOARD
FP-156 FLEXIBLE
(SEE PAGE 4-55)
CN1111
VTR UNREG
AU 2.8V
A 4.75V
13
20
16
CN5804
20
13
17
F3900
D3904
LASER LINK
IC5801
STEREO
MIC AMP
(SEE PAGE 4-55)
IC3901
IR
TRANSMITTER
(SEE PAGE 4-57)
IC3900
REMOTE
COMMANDER
RECEIVER
(SEE PAGE 4-58)
R5845
CN5801
11
PH001, 002
MANUAL
FOCUS
SENSOR
CONTROL SWITCH BLOCK
(FK-10000)
(SEE PAGE 4-71)
CN1107
D 2.8V
MT 5V
4
9
LED
IC3103
(TRW)
REC/PB
AMP
(SEE PAGE 4-30)
IC3101
(TRF)
EQ, PLL,
A/D CONVERTER
(SEE PAGE 4-29)
IC3301
VIDEO DSP
D/A CONVERTER
(SEE PAGE 4-25)
IC3303
(LIP)
DV
INTERFACE
(SEE PAGE 4-28)
IC2201
Y/C
PROCESSOR
(SEE PAGE 4-17)
IC3701
VIDEO
IN/OUT
(SEE PAGE 4-22)
IC3603
(BBI)
A/D CONVERTER
AFC
AGC
(SEE PAGE 4-24)
IC5702
A/D, D/A
CONVERTER
(SEE PAGE 4-44)
IC5701
AUDIO
IN/OUT
(SEE PAGE 4-44)
IC1501
TIMING
GENERATOR
(SEE PAGE 4-15)
IC1502
S/H, AGC, A/D
CONVERTER
(SEE PAGE 4-15)
IC2202
INVERTER
(SEE PAGE 4-17)
IC3102
GATE
(SEE PAGE 4-29)
FB3307
FB3303
R3308
FB2202
VTR UNREG
MT 5V
CAP VS
DRUM VS
D 1.5V
D 1.9V
D 1.5V (CAIN)
D 2.8V
A 2.8V
AU 2.8V
RP 6V
A 4.75V
RP 4.75V
AU 4.75V
CAM –6.5V
CAM 12V
1.9V
13
VC-235 BOARD (1/2)
(SEE PAGE 3-8)
IC4401
LOADING/DRUM
MOTOR DRIVE,
SENSOR AMP
(SEE PAGE-4-40)
IC2291
(EVR)
D/A CONVERTER
(SEE PAGE-4-42)
IC3201
Hi 8/Std 8
PB AMP
(SEE PAGE 4-31)
IC3202
RF ENV
DET
(SEE PAGE 4-32)
IC4501
Digital 8
MECHANISM
CONTROL
(SEE PAGE 4-35)
IC4902
CAMERA
CONTROL
Hi 8/Std 8
MECHANISM
CONTROL
(SEE PAGE 4-37)
22
53
ZOOM RESET LED
FC RESET LED
Q1552,
Q1553
L1552
IC1553
ZOOM/FOCUS
MOTOR
DRIVE
(SEE PAGE 4-19)
IC1552
IRIS
DRIVE,
HALL
AMP
(SEE PAGE 4-20)
IC4502
EEPROM
(SEE PAGE 4-36)
IC4901
EEPROM
(SEE PAGE 4-37)
R4411
R4407
CN4402
7·8
9
13
CN4404
10
9
7·8
CN4403
CN1551
8 · 11
13
20
DRUM
MOTOR
M901
T REEL,
S REEL
SENSOR
H001, 002
CAPSTAN
MOTOR
M902
MECHA DECK
(B700 MECHANISM) (SEE PAGE 4-39)
ZOOM,
FOCUS
LED
ZOOM
LENS
LENS BLOCK
05

3-6. POWER BLOCK DIAGRAM 3


720H model
(SEE PAGE 4-8)
IC101
CCD IMAGER
⑮
VC-235 BOARD (CN1501) (SEE PAGE 3-8)
CAM –6.5V
CAM 12V
7
4
CN101
CD-242 BOARD
960H model
(SEE PAGE 4-10)
IC152
BUFFER
IC151
CCD IMAGER
⑭
VC-235 BOARD (CN1501) (SEE PAGE 3-8)
CAM –6.5V
A 4.75V
CAM 12V
7
5
4
CN151
CD-244/269 BOARD
CD-244 : DCR-TRV120E/TRV125E
CD-269 : DCR-TR8000E/TR8100E
TRV model
PD-117 BOARD
IC5501
RGB DRIVER
(SEE PAGE 4-79)
IC5602
CURRENT DETECT
(SEE PAGE 4-81)
Note : CN5501 pin name A/B
A : TYPE C model
B : TYPE S model
TYPE C model
CN5501
LCD901
VDD
LCD PANEL
⑯
VC-235 BOARD (CN1109) (SEE PAGE 3-8)
PANEL 2.8V
PANEL –15.3V
PANEL 4.75V
PANEL 13.3V
CN5701
8
5
7
6
VDD/VSH3V
VGL/VGL
VSH/VSH5V
VGH/VGH
4
23
3
24
1
Q5502 - 5506
IC5601
BACK LIGHT BRIGHT SWITCH
(SEE PAGE 4-81)
IC5502
TIMING GENERATOR
(SEE PAGE 4-79)
28
2
4
IC5503
TYPE S model
BL CONT
4
①
BL REG
3
T5601
CN5604
10
ND901
BACK LIGHT
CF-69/71 BOARD
(CF-69 : TRV model/CF-71 : TR model)
CN001
Q002, 003
CN005
CN5704
CN5705
VTR UNREG
39
6
6
2
LCD LED ON
34
EVR 3V
33
5
5
IC5701
LCD DRIVER
(SEE PAGE 4-82)
LCD902
CHARACTER DISPLAY
LED901
BACK LIGHT
BATT LI 3V
31
BH001
LITHIUM BATTERY
⑫
VC-235 BOARD (CN1105) (SEE PAGE 3-8)
D 2.8V
35
CAMERA FUNCTION SWITCH
CN007 : TRV model
CN005 : TR model
VF-129 BOARD
EVF 4.75V
42
43
1
1
EVF 4.75V
CN901
IC901
VIDEO AMP, CRT DRIVE
(SEE PAGE 4-73)
CN006
2
IC002
LCD DRIVER
(SEE PAGE 4-66)
LED904
BACK LIGHT
LCD904
CHARACTER DISPLAY
TR model
05

720H model : DCR-TRV120/TRV120P
960H model : DCR-TRV120E/TRV125E/TR8000E/TR8100E

TYPE C model : DCR-TRV120E : AUS, CN, E, HK, JE
TYPE S model : DCR-TRV120/TRV120E : AEP, EE, NE, RU, UK/TRV120P/TRV125E

TRV model : DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model : DCR-TR8000E/TR8100E

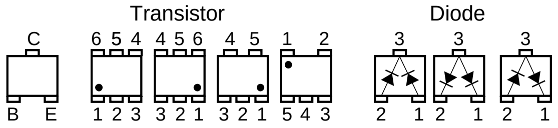
SECTION 4

PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

THIS NOTE IS COMMON FOR WIRING BOARDS AND SCHEMATIC DIAGRAMS
(In addition to this, the necessary note is printed in each block)

(For printed wiring boards)

- ▨: Pattern from the side which enables seeing.
  (The other layers' patterns are not indicated)
- Through hole is omitted.
- Circled numbers refer to waveforms.
- There are few cases that the part printed on diagram isn't mounted in this model.
- Chip parts.



(For schematic diagrams)

- All capacitors are in μF unless otherwise noted. pF : μμF. 50 V or less are not indicated except for electrolytics and tantalums.
- Chip resistors are 1/10 W unless otherwise noted. kΩ=1000 Ω, MΩ=1000 kΩ.
- Caution when replacing chip parts.
  New parts must be attached after removal of chip.
  Be careful not to heat the minus side of tantalum capacitor, Because it is damaged by the heat.
- Some chip part will be indicated as follows.

Example C541 L452
22U 10UH
TA A 2520

Kinds of capacitor
Temperature characteristics
External dimensions (mm)

- Constants of resistors, capacitors, ICs and etc with XX indicate that they are not used.
  In such cases, the unused circuits may be indicated.
- Parts with ★ differ according to the model/destination. Refer to the mount table for each function.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- Signal name
  XEDIT → $\overline{\text{EDIT}}$ PB/XREC → PB/$\overline{\text{REC}}$
- ▭: non flammable resistor
- ∿: fusible resistor
- ▭: panel designation
- ━━: B+ Line *
- ━ ━ ━: B– Line *
- ⇨ : IN/OUT direction of (+,–) B LINE. *
- ▭: adjustment for repair. *
- Circled numbers refer to waveforms. *

* Indicated by the color red.

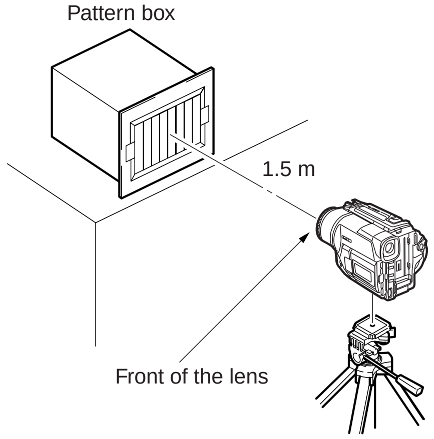
Note : The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.

Note : Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifie.

(Measuring conditions voltage and waveform)

- Voltages and waveforms are measured between the measurement points and ground when camera shoots color bar chart of pattern box. They are reference values and reference waveforms. *
  (VOM of DC 10 MΩ input impedance is used)
- Voltage values change depending upon input impedance of VOM used.)

1. Connection



2. Adjust the distance so that the output waveform of Fig. a and the Fig. b can be obtain.

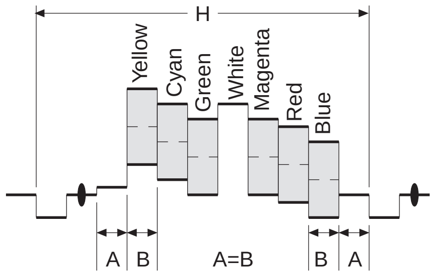


Fig. a (Video output terminal output waveform)

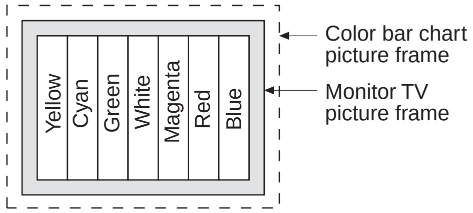
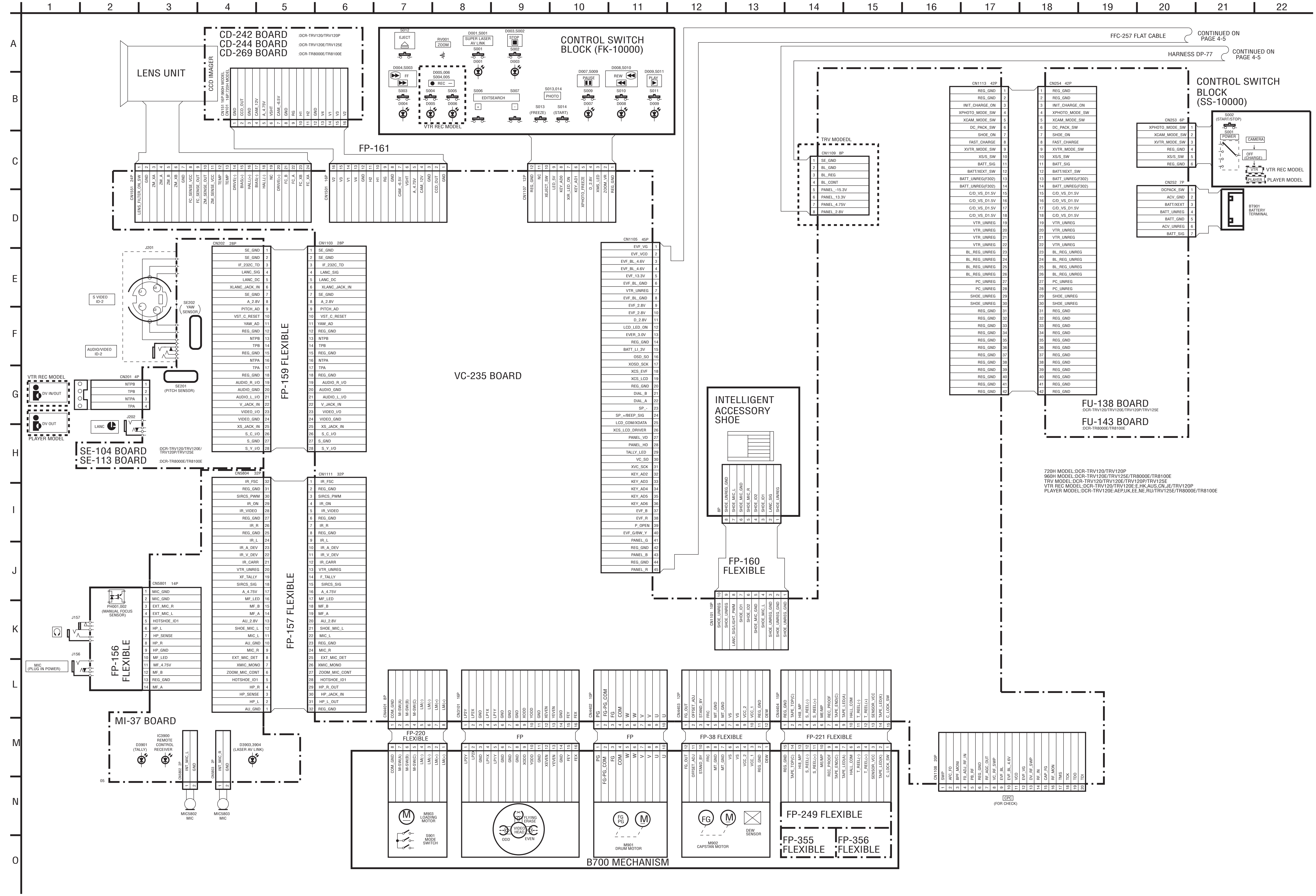


Fig.b (Picture on monitor TV)

When indicating parts by reference number, please include the board name.

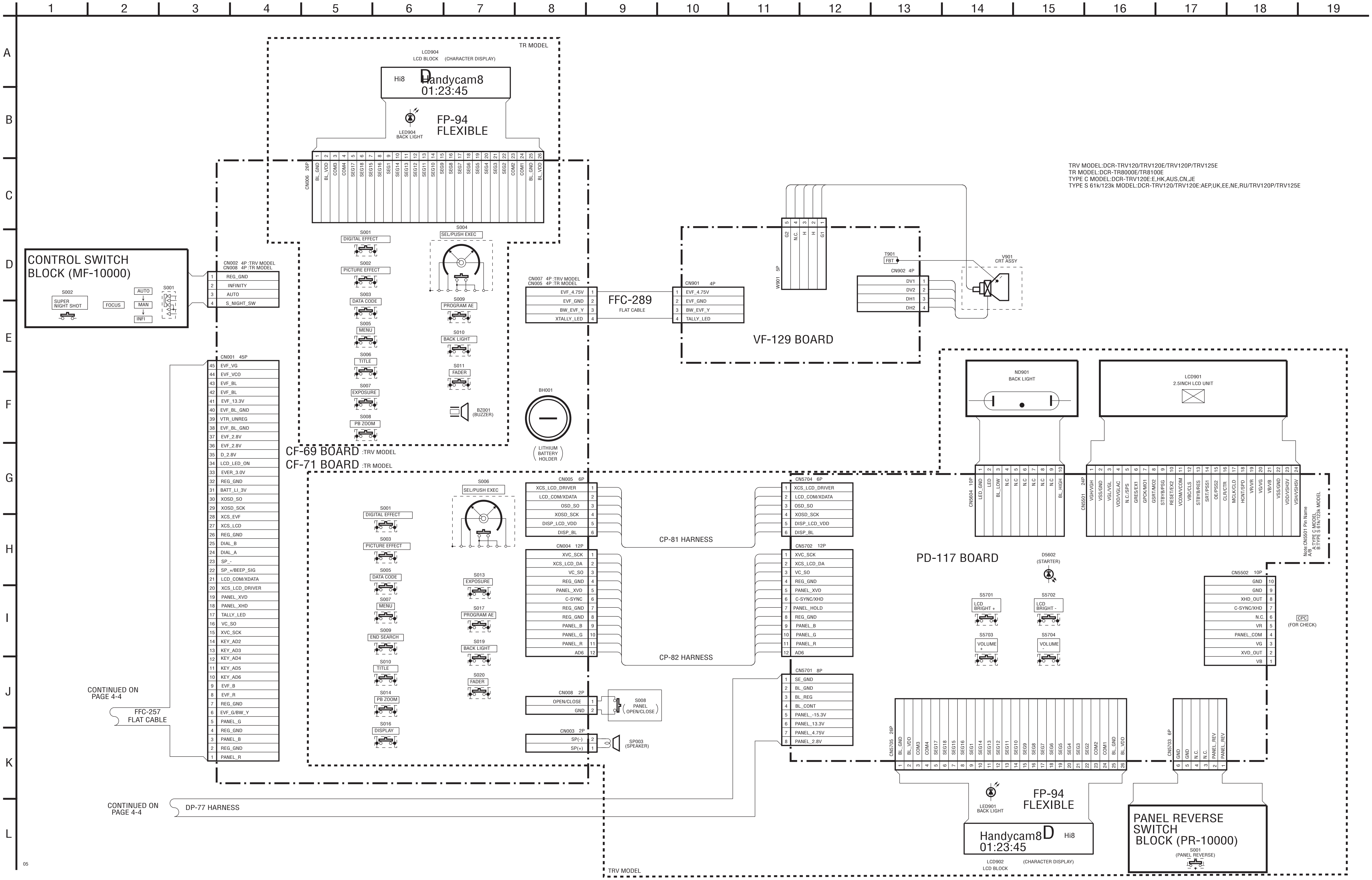
4-1. FRAME SCHEMATIC DIAGRAMS

FRAME (1/2) SCHEMATIC DIAGRAM


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
A B C D E F G H I J K L M N O
LENS UNIT
CCD IMAGER
CD-242 BOARD :DCR-TRV120/TRV120P
CD-244 BOARD :DCR-TRV120E/TRV125E
CD-269 BOARD :DCR-TR8000E/TR8100E
CONTROL SWITCH BLOCK (FK-10000)
EJECT
ZOOM
SUPER LASER AV LINK
STOP
FF
REC
EDITSEARCH
PHOTO
PAUSE
REW
PLAY
VTR REC MODEL
FP-161
CN1551 24P
CN1501 16P
CN1107 12P
J201
S VIDEO ID-2
AUDIO/VIDEO ID-2
SE202 YAW SENSOR
SE201 (PITCH SENSOR)
VTR REC MODEL
DV IN/OUT
DV OUT
PLAYER MODEL
LANC
J202
CN201 4P
SE-104 BOARD :DCR-TRV120/TRV120E/TRV120P/TRV125E
SE-113 BOARD :DCR-TR8000E/TR8100E
CN202 28P
CN1103 28P
FP-159 FLEXIBLE
CN5804 32P
CN1111 32P
FP-157 FLEXIBLE
VC-235 BOARD
CN1105 45P
FFC-257 FLAT CABLE
CONTINUED ON PAGE 4-5
HARNESS DP-77
CONTINUED ON PAGE 4-5
TRV MODEDL
CN1109 8P
CN1113 42P
CN254 42P
FU-138 BOARD :DCR-TRV120/TRV120E/TRV120P/TRV125E
FU-143 BOARD :DCR-TR8000E/TR8100E
CONTROL SWITCH BLOCK (SS-10000)
CN253 6P
CN252 7P
S002 (START/STOP)
S001 POWER
CAMERA
OFF (CHARGE)
VTR REC MODEL
PLAYER MODEL
BT901 BATTERY TERMINAL
INTELLIGENT ACCESSORY SHOE
FP-160 FLEXIBLE
CN1101 10P
PH001,002 (MANUAL FOCUS SENSOR)
J157
J156
MIC (PLUG IN POWER)
FP-156 FLEXIBLE
CN5801 14P
MI-37 BOARD
D3901 (TALLY)
IC3900 REMOTE CONTROL RECEIVER
D3903,3904 (LASER AV LINK)
MIC5802 MIC
MIC5803 MIC
CN4401 8P
CN4101 16P
CN4402 10P
CN4403 12P
CN4404 15P
FP-220 FLEXIBLE
FP
FP
FP-38 FLEXIBLE
FP-221 FLEXIBLE
M903 LOADING MOTOR
S901 MODE SWITCH
FLYING ERASE
VIDEO HEAD
ODD
EVEN
M901 DRUM MOTOR
M902 CAPSTAN MOTOR
DEW SENSOR
FP-249 FLEXIBLE
FP-355 FLEXIBLE
FP-356 FLEXIBLE
B700 MECHANISM
CN1108 20P
CPC (FOR CHECK)

720H MODEL:DCR-TRV120/TRV120P
960H MODEL:DCR-TRV120E/TRV125E/TR8000E/TR8100E
TRV MODEL:DCR-TRV120/TRV120E/TRV120P/TRV125E
VTR REC MODEL:DCR-TRV120/TRV120E:E,HK,AUS,CN,JE/TRV120P
PLAYER MODEL:DCR-TRV120E:AEP,UK,EE,NE,RU/TRV125E/TR8000E/TR8100E

FRAME (2/2) SCHEMATIC DIAGRAM


TR MODEL
LCD904
LCD BLOCK (CHARACTER DISPLAY)
Hi8
Handycam8
01:23:45
LED904
BACK LIGHT
FP-94
FLEXIBLE
CN006 26P
CONTROL SWITCH
BLOCK (MF-10000)
S002 SUPER NIGHT SHOT
FOCUS
AUTO
MAN
INFI
S001
CN002 4P :TRV MODEL
CN008 4P :TR MODEL
REG_GND
INFINITY
AUTO
S_NIGHT_SW
S001 DIGITAL EFFECT
S002 PICTURE EFFECT
S003 DATA CODE
S005 MENU
S006 TITLE
S007 EXPOSURE
S008 PB ZOOM
S004 SEL/PUSH EXEC
S009 PROGRAM AE
S010 BACK LIGHT
S011 FADER
BZ001 (BUZZER)
BH001
LITHIUM BATTERY HOLDER
CF-69 BOARD :TRV MODEL
CF-71 BOARD :TR MODEL
CN007 4P :TRV MODEL
CN005 4P :TR MODEL
EVF_4.75V
EVF_GND
BW_EVF_Y
XTALLY_LED
FFC-289
FLAT CABLE
CN901 4P
TALLY_LED
VF-129 BOARD
W901 5P
G2
N.C.
H
G1
T901 FBT
CN902 4P
DV1
DV2
DH1
DH2
V901 CRT ASSY
CN001 45P
EVF_VG
EVF_VCO
EVF_BL
EVF_13.3V
EVF_BL_GND
VTR_UNREG
EVF_2.8V
D_2.8V
LCD_LED_ON
EVER_3.0V
REG_GND
BATT_LI_3V
XOSD_SO
XOSD_SCK
XCS_EVF
XCS_LCD
DIAL_B
DIAL_A
SP_-
SP_+/BEEP_SIG
LCD_COM/XDATA
XCS_LCD_DRIVER
PANEL_XVD
PANEL_XHD
TALLY_LED
VC_SO
XVC_SCK
KEY_AD2
KEY_AD3
KEY_AD4
KEY_AD5
KEY_AD6
EVF_B
EVF_R
EVF_G/BW_Y
PANEL_G
PANEL_B
PANEL_R
CONTINUED ON PAGE 4-4
FFC-257
FLAT CABLE
S009 END SEARCH
S010 TITLE
S014 PB ZOOM
S016 DISPLAY
S013 EXPOSURE
S017 PROGRAM AE
S019 BACK LIGHT
S020 FADER
CN005 6P
OSD_SO
XOSD_SCK
DISP_LCD_VDD
DISP_BL
CN004 12P
REG_GND
C-SYNC
AD6
CP-81 HARNESS
CP-82 HARNESS
CN008 2P
OPEN/CLOSE
GND
S008 PANEL OPEN/CLOSE
CN003 2P
SP(-)
SP(+)
SP003 (SPEAKER)
CN5704 6P
CN5702 12P
C-SYNC/XHD
PANEL_HOLD
CN5701 8P
SE_GND
BL_GND
BL_REG
BL_CONT
PANEL_-15.3V
PANEL_13.3V
PANEL_4.75V
PANEL_2.8V
CONTINUED ON PAGE 4-4
DP-77 HARNESS
ND901
BACK LIGHT
LCD901
2.5INCH LCD UNIT
CN5604 10P
LED_GND
LED
BL_LOW
N.C
BL_HIGH
CN5501 24P
Note:CN5501 Pin Name
A/B
A:TYPE C MODEL
B:TYPE S 61k/123k MODEL
PD-117 BOARD
D5602 (STARTER)
S5701 LCD BRIGHT +
S5702 LCD BRIGHT -
S5703 VOLUME +
S5704 VOLUME -
CN5502 10P
XHD_OUT
C-SYNC/XHD
VR
PANEL_COM
VG
XVD_OUT
VB
CPC (FOR CHECK)
CN5705 26P
CN5703 6P
PANEL_REV
LED901
BACK LIGHT
FP-94
FLEXIBLE
Handycam8
01:23:45
Hi8
LCD902
LCD BLOCK (CHARACTER DISPLAY)
PANEL REVERSE SWITCH BLOCK (PR-10000)
S001 (PANEL REVERSE)
TRV MODEL
05

TRV MODEL:DCR-TRV120/TRV120E/TRV120P/TRV125E
TR MODEL:DCR-TR8000E/TR8100E
TYPE C MODEL:DCR-TRV120E:E,HK,AUS,CN,JE
TYPE S 61k/123k MODEL:DCR-TRV120/TRV120E:AEP,UK,EE,NE,RU/TRV120P/TRV125E

FRAME (2/2)

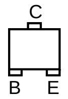
4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

CD-242 (CCD IMAGER) PRINTED WIRING BOARD AND SCHEMATIC DIAGRAM

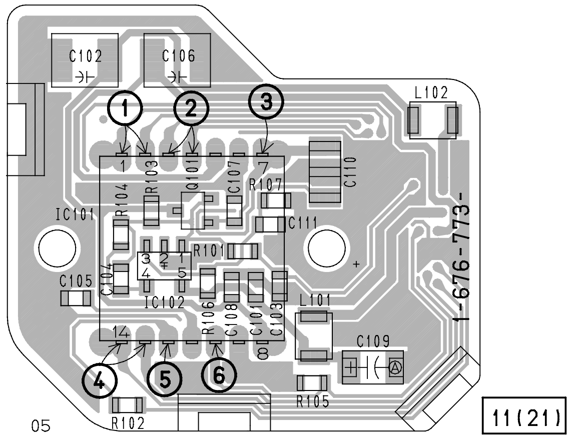
– Ref. No.: CD-242 board; 20,000 series –

– DCR-TRV120/TRV120P –

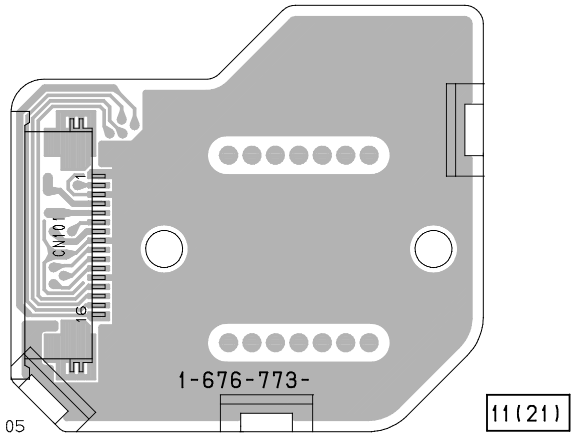
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor

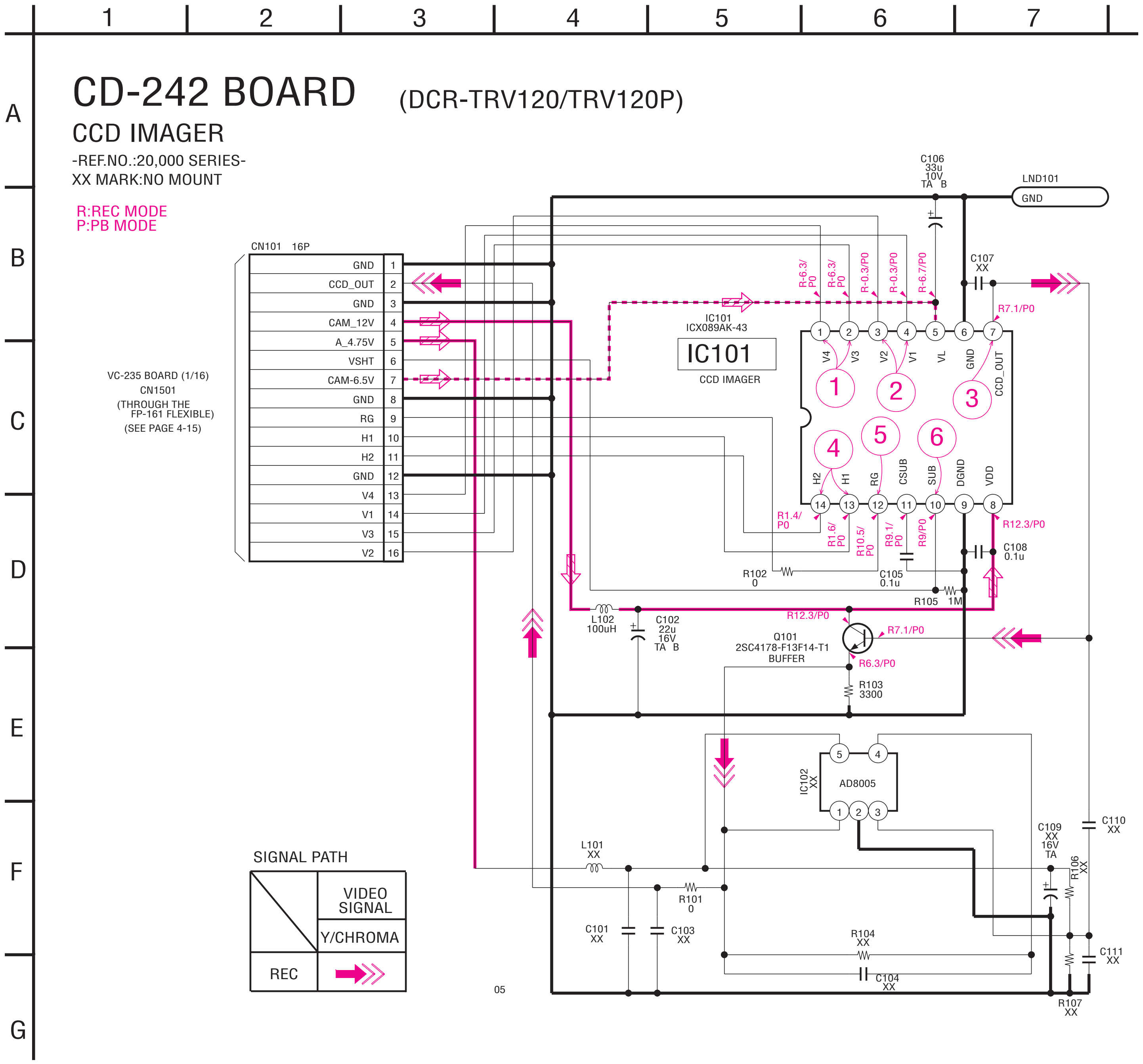


CD-242 BOARD (SIDE A)


C102
C106
L102
①
②
③
IC101
R104
R103
Q101
C107
R107
C110
C111
R101
C105
C104
IC102
R106
C108
C101
C103
L101
C109
④
⑤
⑥
R102
R105
1-676-773-
11(21)
05

CD-242 BOARD (SIDE B)


CN101
1
16
1-676-773-
11(21)
05


1
2
3
4
5
6
7
A
B
C
D
E
F
G
CD-242 BOARD
(DCR-TRV120/TRV120P)
CCD IMAGER
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
R:REC MODE
P:PB MODE
CN101 16P
GND 1
CCD_OUT 2
GND 3
CAM_12V 4
A_4.75V 5
VSHT 6
CAM-6.5V 7
GND 8
RG 9
H1 10
H2 11
GND 12
V4 13
V1 14
V3 15
V2 16
VC-235 BOARD (1/16)
CN1501
(THROUGH THE FP-161 FLEXIBLE)
(SEE PAGE 4-15)
C106
33u
10V
TA B
LND101
GND
C107
XX
R7.1/P0
IC101
ICX089AK-43
IC101
CCD IMAGER
R-6.3/P0
R-6.3/P0
R-0.3/P0
R-0.3/P0
R-6.7/P0
V4
V3
V2
V1
VL
GND
CCD_OUT
H2
H1
RG
CSUB
SUB
DGND
VDD
R1.4/P0
R1.6/P0
R10.5/P0
R9.1/P0
R9/P0
R12.3/P0
C108
0.1u
R102
0
C105
0.1u
R105 1M
L102
100uH
C102
22u
16V
TA B
R12.3/P0
Q101
2SC4178-F13F14-T1
BUFFER
R7.1/P0
R6.3/P0
R103
3300
IC102
XX
AD8005
L101
XX
R101
0
C101
XX
C103
XX
R104
XX
C104
XX
C109
XX
16V
TA
R106
XX
C110
XX
C111
XX
R107
XX
05
SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
REC

Precautions for Replacement of CCD Imager

- The CD-242 board mounted as a repair part is not equipped with a CCD imager.
  When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
- As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
  In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

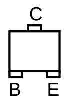
CD-244/269 (CCD IMAGER) PRINTED WIRING BOARD AND SHEMATIC DIAGRAM

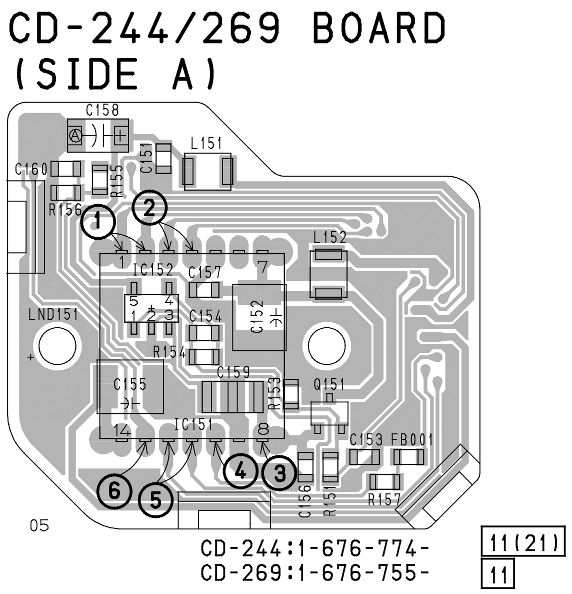
– Ref. No.: CD-244/269 board; 20,000 series –

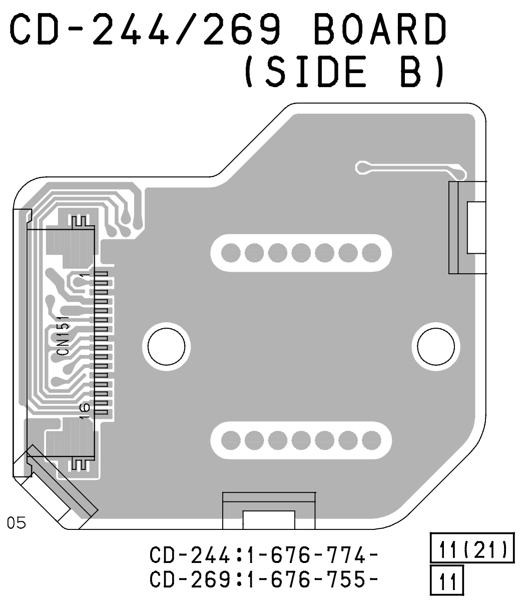
– DCR-TRV120E/TRV125E/TR8000E/TR8100E –

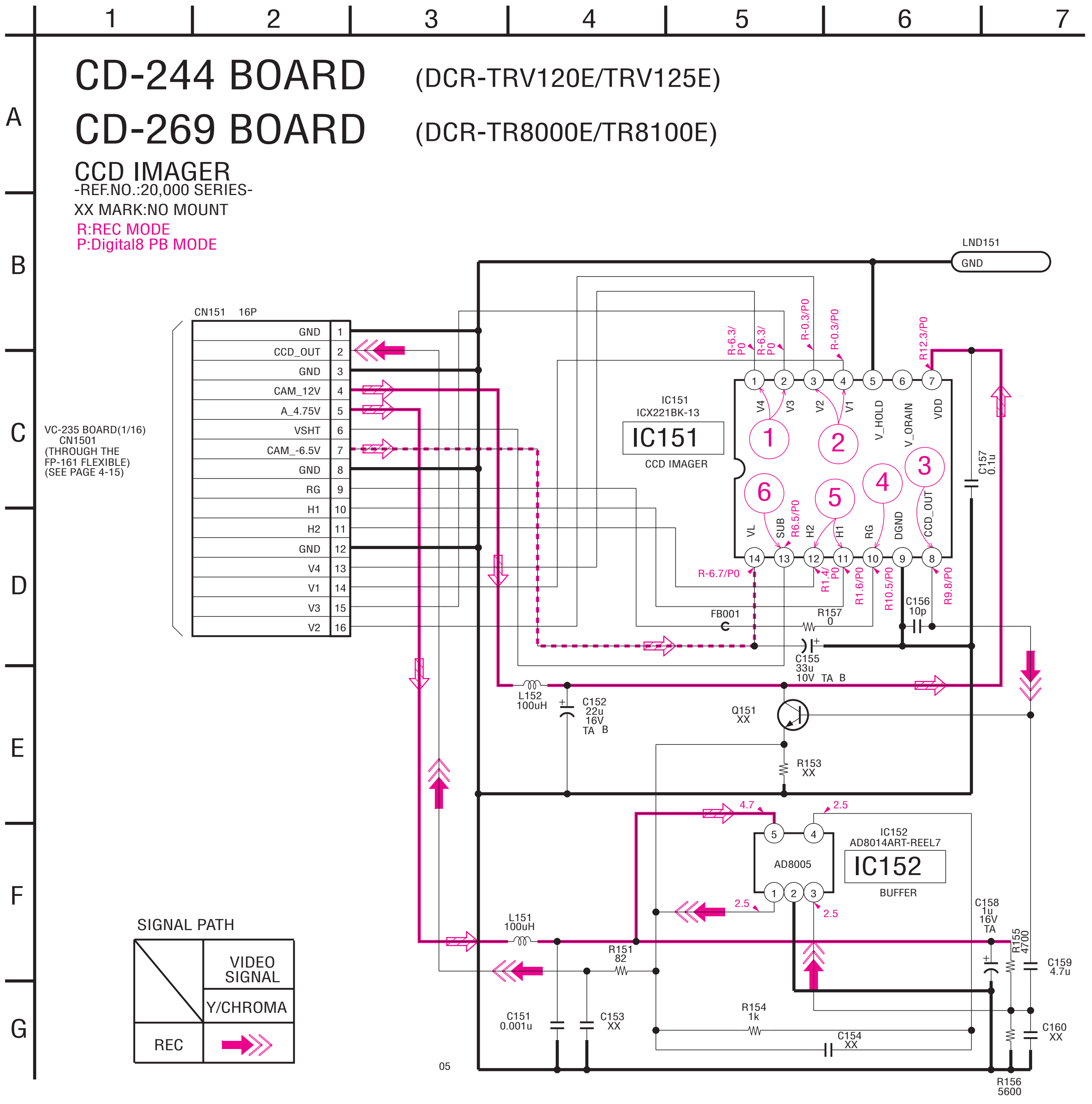
• See page 4-87 for waveforms.

- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor




CD-244/269 BOARD
(SIDE A)
C158
C160
L151
C151
R155
R156
1
2
L152
IC152
C157
LND151
C154
C152
R154
C155
C159
Q151
R153
IC151
14
8
7
4
3
6
5
C153
FB001
C156
R151
R157
05
CD-244:1-676-774-
CD-269:1-676-755-
11(21)
11


CD-244/269 BOARD
(SIDE B)
CN151
16
05
CD-244:1-676-774-
CD-269:1-676-755-
11(21)
11


1
2
3
4
5
6
7
A
B
C
D
E
F
G
CD-244 BOARD (DCR-TRV120E/TRV125E)
CD-269 BOARD (DCR-TR8000E/TR8100E)
CCD IMAGER
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
R:REC MODE
P:Digital8 PB MODE
CN151 16P
GND 1
CCD_OUT 2
GND 3
CAM_12V 4
A_4.75V 5
VSHT 6
CAM_-6.5V 7
GND 8
RG 9
H1 10
H2 11
GND 12
V4 13
V1 14
V3 15
V2 16
VC-235 BOARD(1/16)
CN1501
(THROUGH THE
FP-161 FLEXIBLE)
(SEE PAGE 4-15)
LND151
GND
IC151
ICX221BK-13
IC151
CCD IMAGER
V4
V3
V2
V1
V_HOLD
V_DRAIN
VDD
VL
SUB
H2
H1
RG
DGND
CCD_OUT
R-6.3/P0
R-6.3/P0
R-0.3/P0
R-0.3/P0
R12.3/P0
R-6.7/P0
R6.5/P0
R1.4/P0
R1.6/P0
R10.5/P0
R9.8/P0
C157
0.1u
C156
10p
R157
0
FB001
C155
33u
10V TA B
L152
100uH
C152
22u
16V
TA B
Q151
XX
R153
XX
4.7
2.5
2.5
2.5
IC152
AD8014ART-REEL7
AD8005
IC152
BUFFER
L151
100uH
R151
82
C151
0.001u
C153
XX
R154
1k
C154
XX
C158
1u
16V
TA
R155
4700
C159
4.7u
C160
XX
R156
5600
05
SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
REC

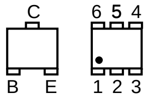
Precautions for Replacement of CCD Imager

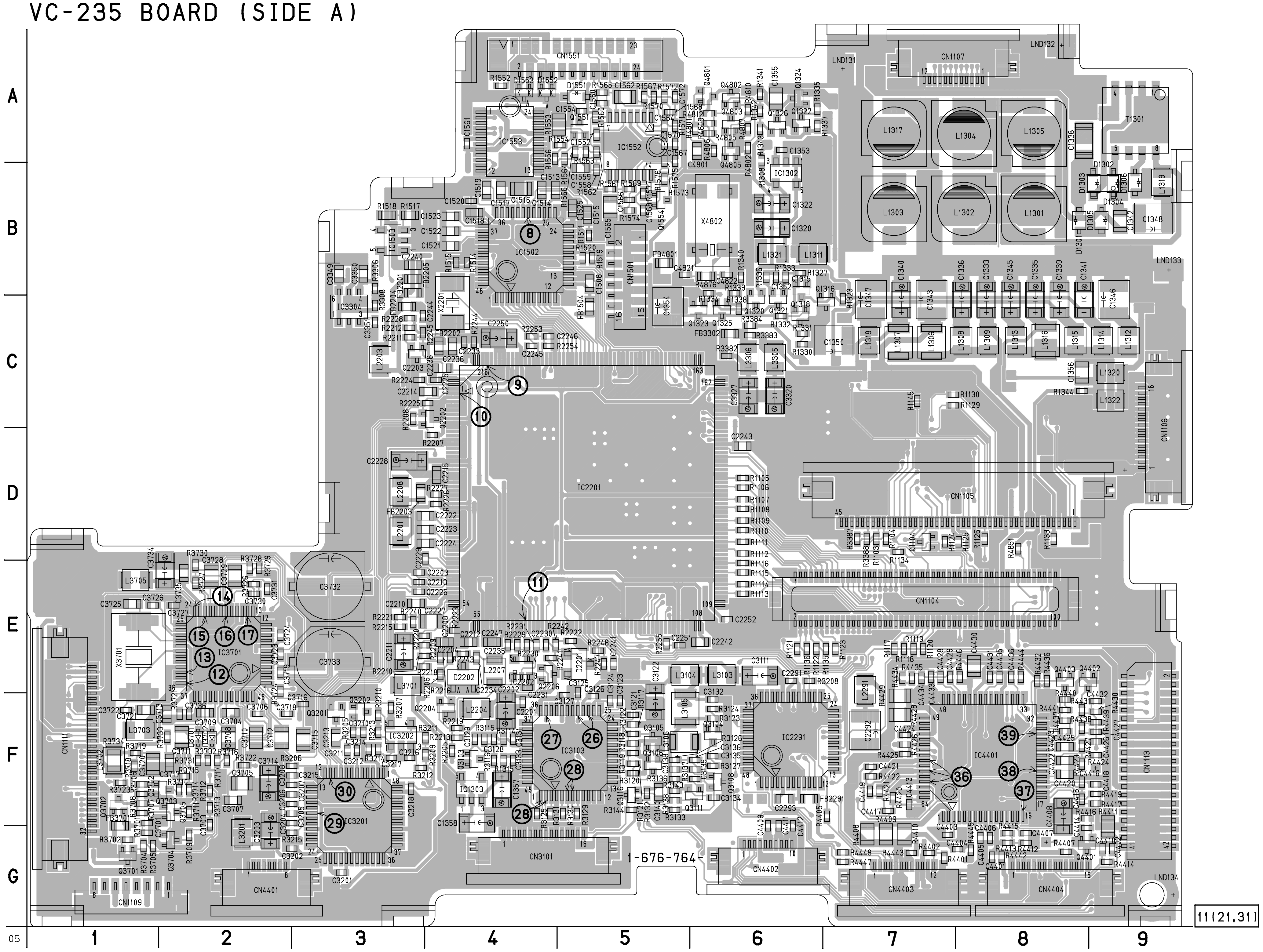
- The CD-244/269 board mounted as a repair part is not equipped with a CCD imager.
  When replacing this board, remove the CCD imager from the old one and mount it onto the new one.
- If the CCD imager has been replaced, carry out all the adjustments for the camera section.
- As the CCD imager may be damaged by static electricity from its structure, handle it carefully like for the MOS IC.
  In addition, ensure that the receiver is not covered with dusts nor exposed to strong light.

VC-235 (CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO /AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER) PRINTED WIRING BOARD

– Ref. No.: VC-235 board; 10,000 series –

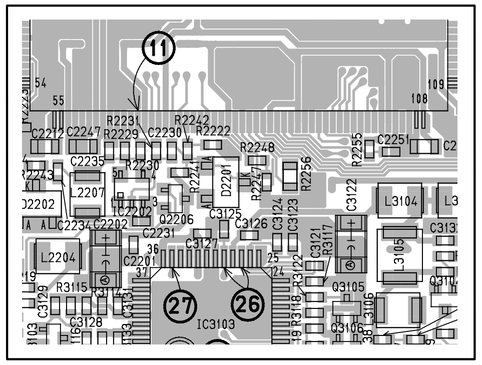
- **For Printed Wiring Board.**
- VC-235 board is eight-layer print board. However, the patterns of layers 2 to 7 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-91, 92 for printed parts location.
- Chip transistor




VC-235 BOARD (SIDE A)
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
05
IC1553
IC1552
IC1502
IC1302
IC3304
IC2201
IC3701
IC3201
IC3202
IC3103
IC1303
IC2291
IC4401
CN1551
CN1107
CN1501
CN1106
CN1105
CN1104
CN1111
CN1109
CN4401
CN3101
CN4402
CN4403
CN4404
CN1113
X4802
X3701
T1301
L1317
L1304
L1305
L1303
L1302
L1301
LND131
LND132
LND133
LND134
C3732
C3733
1-676-764-
11(21,31)

VC-235 BOARD (SIDE A)
Part No. 1-676-764- 12 (22, 32)
Location: E – 4, 5

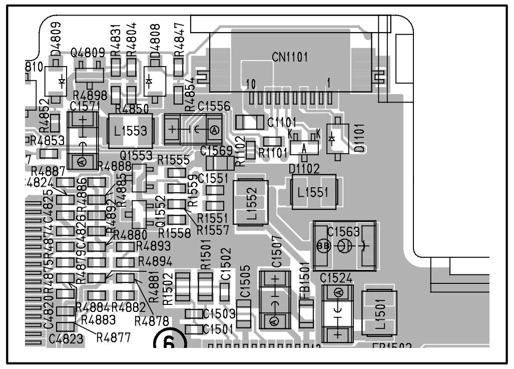
- Refer to the printed wiring board for suffix number 11 (21, 31) for the parts not be shown here.

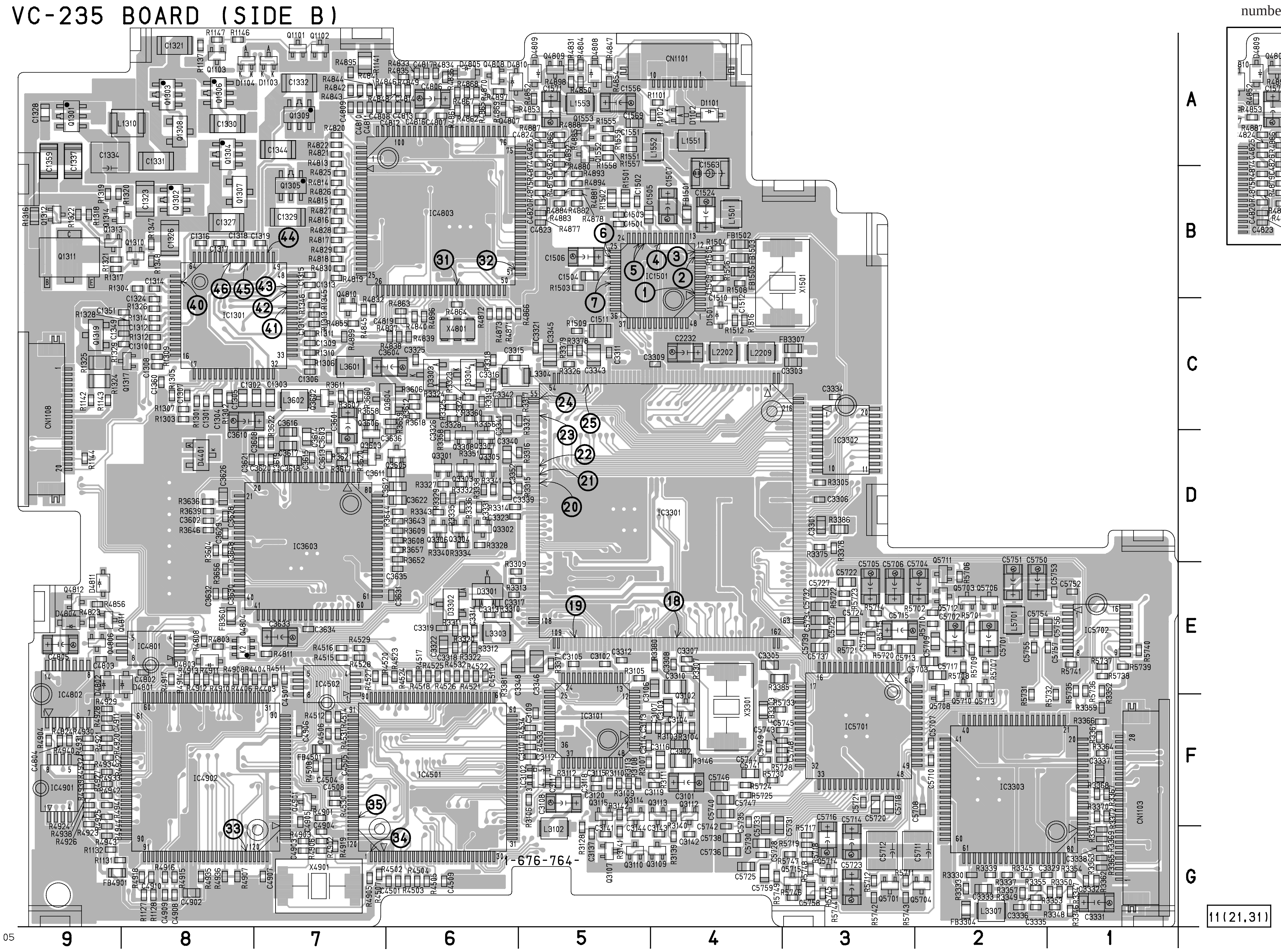

IC3103
L2207
L2204
L3104
L3105

CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER

VC-235 BOARD (SIDE B)
Part No. 1-676-764- 12 (22, 32)
Location: A – 4, 5

- Refer to the printed wiring board for suffix number 11 (21, 31) for the parts not be shown here.

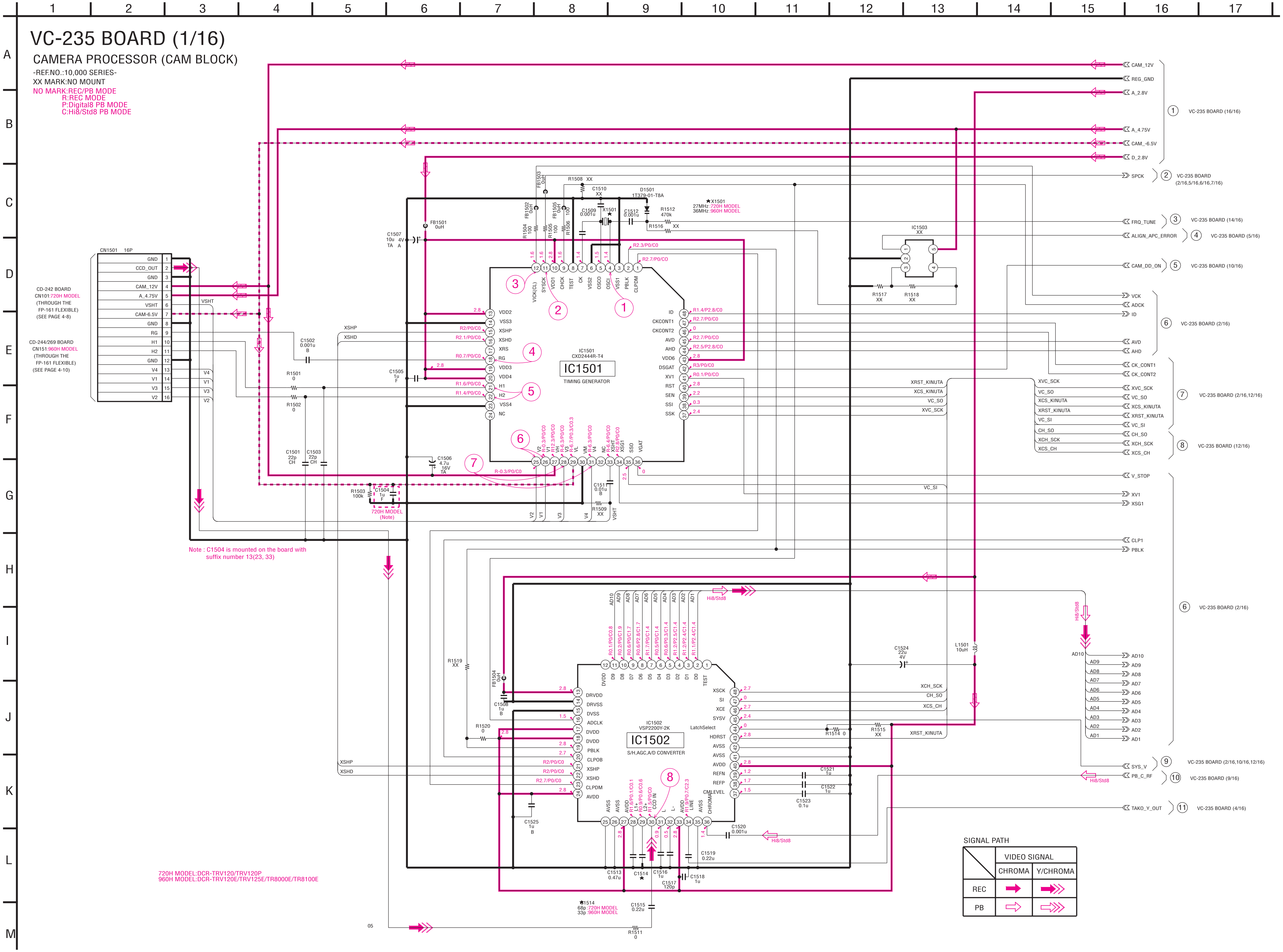

CN1101
L1553
L1552
L1551
C1563
C1524
L1501
FB1502


VC-235 BOARD (SIDE B)
A
B
C
D
E
F
G
9
8
7
6
5
4
3
2
1
05
IC4803
IC1501
IC1301
IC3603
IC3301
IC3302
IC4801
IC4802
IC4901
IC4902
IC4502
IC4501
IC3101
IC5701
IC5702
IC3303
CN1101
CN1108
CN1103
X1501
X4801
X3301
X4901
1-676-764-
11(21.31)

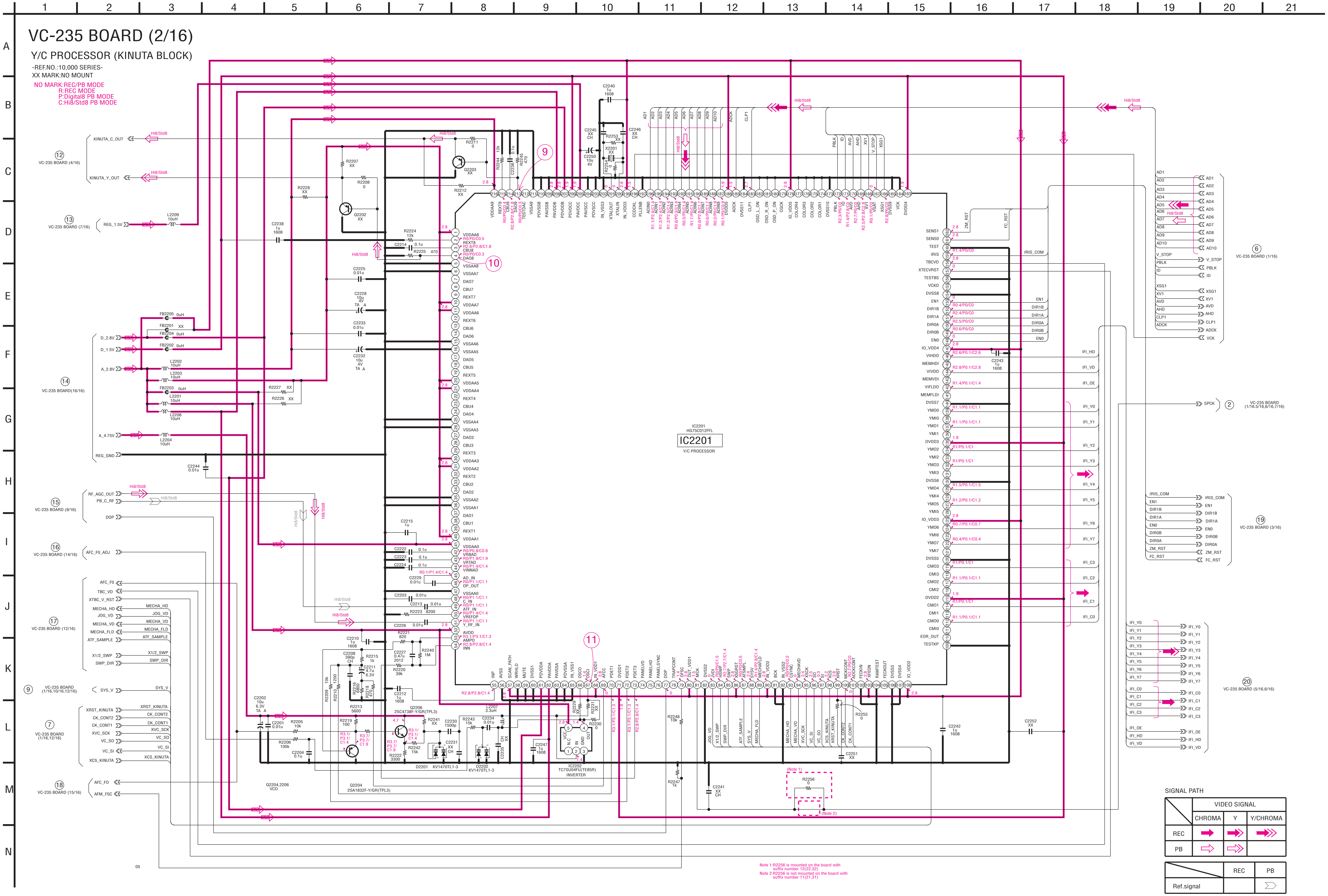
CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER

VC-235

VC-235 (CAMERA PROCESSOR) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-87 for waveforms.


VC-235 BOARD (1/16)
CAMERA PROCESSOR (CAM BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
CN1501 16P
GND
CCD_OUT
GND
CAM_12V
A_4.75V
VSHT
CAM-6.5V
GND
RG
H1
H2
GND
V4
V1
V3
V2
CD-242 BOARD
CN101:720H MODEL
(THROUGH THE FP-161 FLEXIBLE)
(SEE PAGE 4-8)
CD-244/269 BOARD
CN151:960H MODEL
(THROUGH THE FP-161 FLEXIBLE)
(SEE PAGE 4-10)
IC1501
CXD2444R-T4
IC1501
TIMING GENERATOR
IC1502
VSP2200Y-2K
IC1502
S/H,AGC,A/D CONVERTER
IC1503
XX
D1501
1T379-01-T8A
X1501
27MHz:720H MODEL
36MHz:960H MODEL
C1514
68p :720H MODEL
33p :960H MODEL
720H MODEL
(Note)
Note : C1504 is mounted on the board with suffix number 13(23, 33)
720H MODEL:DCR-TRV120/TRV120P
960H MODEL:DCR-TRV120E/TRV125E/TR8000E/TR8100E
CAM_12V
REG_GND
A_2.8V
A_4.75V
CAM_-6.5V
D_2.8V
① VC-235 BOARD (16/16)
SPCK
② VC-235 BOARD (2/16,5/16,6/16,7/16)
FRQ_TUNE
③ VC-235 BOARD (14/16)
ALIGN_APC_ERROR
④ VC-235 BOARD (5/16)
CAM_DD_ON
⑤ VC-235 BOARD (10/16)
VCK
ADCK
ID
AVD
AHD
⑥ VC-235 BOARD (2/16)
CK_CONT1
CK_CONT2
XVC_SCK
VC_SO
XCS_KINUTA
XRST_KINUTA
VC_SI
⑦ VC-235 BOARD (2/16,12/16)
CH_SO
XCH_SCK
XCS_CH
⑧ VC-235 BOARD (12/16)
V_STOP
XV1
XSG1
CLP1
PBLK
AD10
AD9
AD8
AD7
AD6
AD5
AD4
AD3
AD2
AD1
⑥ VC-235 BOARD (2/16)
SYS_V
⑨ VC-235 BOARD (2/16,10/16,12/16)
PB_C_RF
⑩ VC-235 BOARD (9/16)
TAKO_Y_OUT
⑪ VC-235 BOARD (4/16)
Hi8/Std8
SIGNAL PATH
VIDEO SIGNAL
CHROMA
Y/CHROMA
REC
PB

VC-235 (Y/C PROCESSOR) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-87 for waveforms.


VC-235 BOARD (2/16)
Y/C PROCESSOR (KINUTA BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
IC2201
HG75C012FFL
Y/C PROCESSOR
IC2202
TC7SU04FU(TE85R)
INVERTER
Q2202
2SC4738F-Y/GR(TPL3)
Q2204,2206
VCO
Q2204
2SA1832F-Y/GR(TPL3)
D2201 KV1470TL1-3
D2202 KV1470TL1-3
VC-235 BOARD (4/16)
VC-235 BOARD (7/16)
VC-235 BOARD(16/16)
VC-235 BOARD (9/16)
VC-235 BOARD (14/16)
VC-235 BOARD (12/16)
VC-235 BOARD (1/16,10/16,12/16)
VC-235 BOARD (1/16,12/16)
VC-235 BOARD (15/16)
VC-235 BOARD (1/16)
VC-235 BOARD (1/16,5/16,6/16,7/16)
VC-235 BOARD (3/16)
VC-235 BOARD (5/16,6/16)
KINUTA_C_OUT
KINUTA_Y_OUT
REG_1.5V
D_2.8V
D_1.5V
A_2.8V
A_4.75V
REG_GND
RF_AGC_OUT
PB_C_RF
DOP
AFC_F0_ADJ
AFC_F0
TBC_VD
XTBC_V_RST
MECHA_HD
JOG_VD
MECHA_VD
MECHA_FLD
ATF_SAMPLE
X1/2_SWP
SWP_DIR
SYS_V
XRST_KINUTA
CK_CONT2
CK_CONT1
XVC_SCK
VC_SO
VC_SI
XCS_KINUTA
AFM_FSC
IRIS_COM
EN1
DIR1B
DIR1A
EN0
DIR0B
DIR0A
ZM_RST
FC_RST
SPCK
V_STOP
PBLK
ID
XSG1
XV1
AVD
AHD
CLP1
ADCK
VCK
AD1
AD2
AD3
AD4
AD5
AD6
AD7
AD8
AD9
AD10
IFI_Y0
IFI_Y1
IFI_Y2
IFI_Y3
IFI_Y4
IFI_Y5
IFI_Y6
IFI_Y7
IFI_C0
IFI_C1
IFI_C2
IFI_C3
IFI_OE
IFI_HD
IFI_VD
Hi8/Std8
(Note 1)
(Note 2)
R2256
0

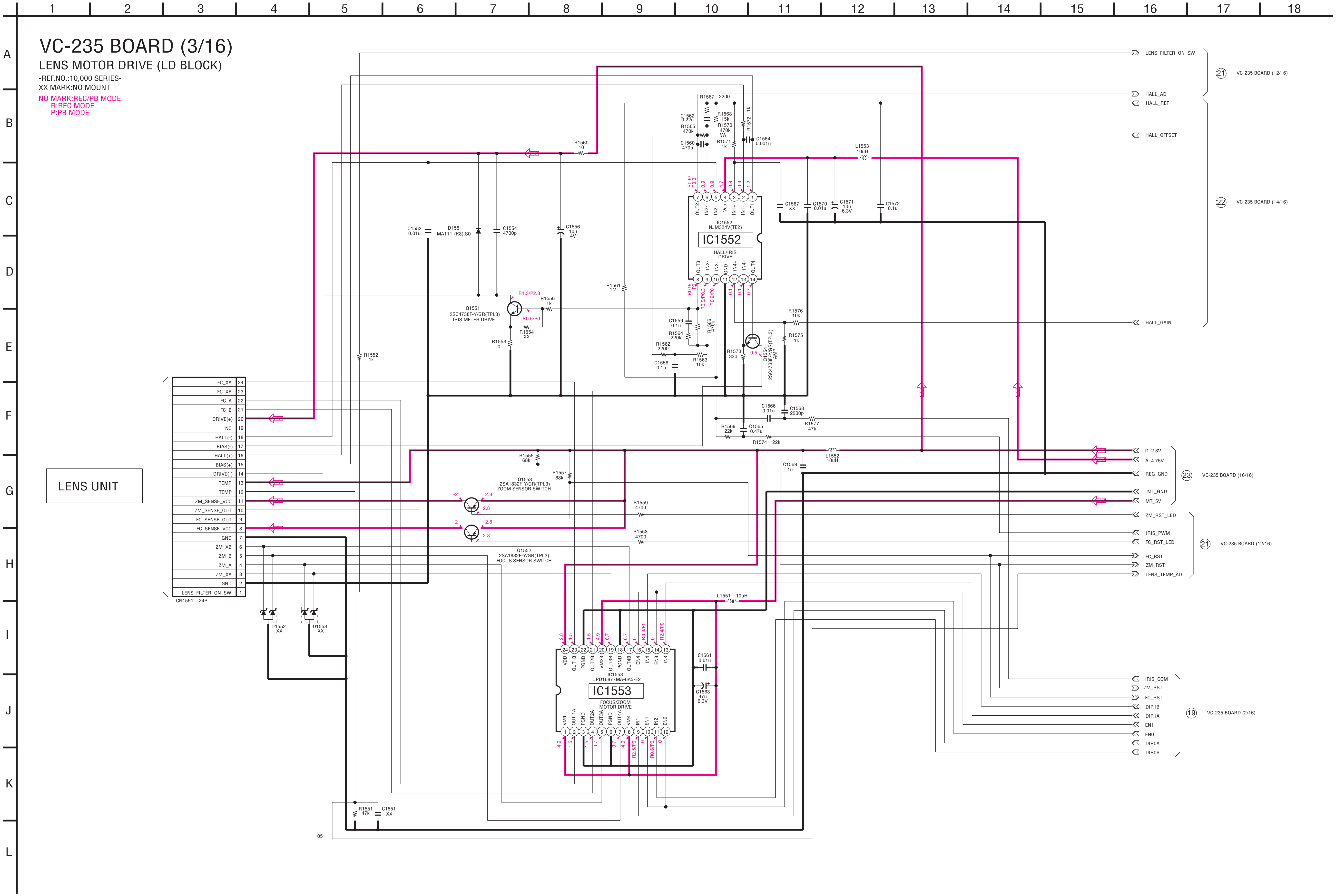
Note 1:R2256 is mounted on the board with suffix number 12(22,32).
Note 2:R2256 is not mounted on the board with suffix number 11(21,31)

SIGNAL PATH

	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡	⇛
PB	⇨	⇨	

	REC	PB
Ref.signal		▷

VC-235 (LENS MOTOR DRIVE) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.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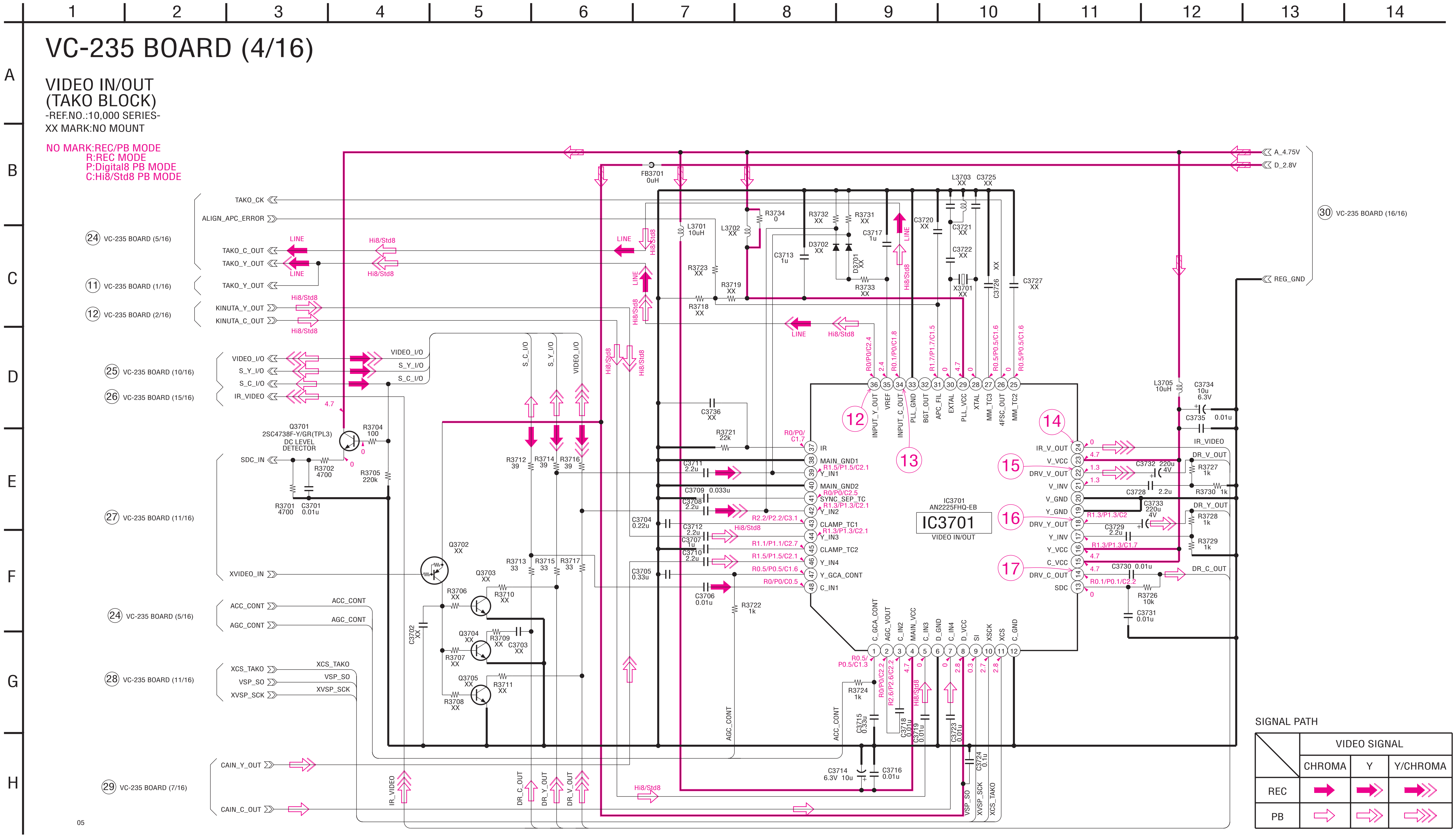
18
A
B
C
D
E
F
G
H
I
J
K
L
VC-235 BOARD (3/16)
LENS MOTOR DRIVE (LD BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:PB MODE
LENS UNIT
CN1551 24P
FC_XA 24
FC_XB 23
FC_A 22
FC_B 21
DRIVE(+) 20
NC 19
HALL(-) 18
BIAS(-) 17
HALL(+) 16
BIAS(+) 15
DRIVE(-) 14
TEMP 13
TEMP 12
ZM_SENSE_VCC 11
ZM_SENSE_OUT 10
FC_SENSE_OUT 9
FC_SENSE_VCC 8
GND 7
ZM_XB 6
ZM_B 5
ZM_A 4
ZM_XA 3
GND 2
LENS_FILTER_ON_SW 1
IC1552
NJM324V(TE2)
HALL/IRIS DRIVE
OUT2 IN2- IN2+ Vcc IN1+ IN1- OUT1
OUT3 IN3- IN3+ GND IN4+ IN4- OUT4
IC1553
UPD16877MA-6A5-E2
FOCUS/ZOOM MOTOR DRIVE
VDD OUT1B PGND OUT2B VM23 OUT3B PGND OUT4B EN4 IN4 EN3 IN3
VM1 OUT 1A PGND OUT2A OUT3A PGND OUT4A VM4 IN1 EN1 IN2 EN2
Q1551
2SC4738F-Y/GR(TPL3)
IRIS METER DRIVE
R1.3/P2.8
R0.5/P0
Q1553
2SA1832F-Y/GR(TPL3)
ZOOM SENSOR SWITCH
Q1552
2SA1832F-Y/GR(TPL3)
FOCUS SENSOR SWITCH
Q1554
2SC4738F-Y/GR(TPL3)
AMP
D1551
MA111-(K8).S0
D1552
XX
D1553
XX
C1552
0.01u
C1554
4700p
C1556
10u
4V
R1560
10
R1561
1M
R1556
1k
R1554
XX
R1553
0
R1552
1k
R1567 2200
C1562
0.22u
R1565
470k
R1568
15k
R1570
470k
R1572 1k
C1560
470p
R1571
1k
C1564
0.001u
L1553
10uH
C1567
XX
C1570
0.01u
C1571
10u
6.3V
C1572
0.1u
C1559
0.1u
R1564
220k
R1566
470k
R1562
2200
C1558
0.1u
R1563
10k
R1573
330
R1576
10k
R1575
1k
C1566
0.01u
C1568
2200p
R1569
22k
C1565
0.47u
R1577
47k
R1574 22k
L1552
10uH
C1569
1u
R1555
68k
R1557
68k
R1559
4700
R1558
4700
L1551 10uH
C1561
0.01u
C1563
47u
6.3V
R1551
47k
C1551
XX
05
LENS_FILTER_ON_SW
HALL_AD
HALL_REF
HALL_OFFSET
HALL_GAIN
D_2.8V
A_4.75V
REG_GND
MT_GND
MT_5V
ZM_RST_LED
IRIS_PWM
FC_RST_LED
FC_RST
ZM_RST
LENS_TEMP_AD
IRIS_COM
ZM_RST
FC_RST
DIR1B
DIR1A
EN1
EN0
DIR0A
DIR0B
㉑ VC-235 BOARD (12/16)
㉒ VC-235 BOARD (14/16)
㉓ VC-235 BOARD (16/16)
㉑ VC-235 BOARD (12/16)
⑲ VC-235 BOARD (2/16)

LENS MOTOR DRIVE
VC-235 (3/16)

VC-235 (VIDEO IN/OUT) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-88 for waveforms.



VC-235 BOARD (4/16)

VIDEO IN/OUT
(TAKO BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE

1
2
3
4
5
6
7
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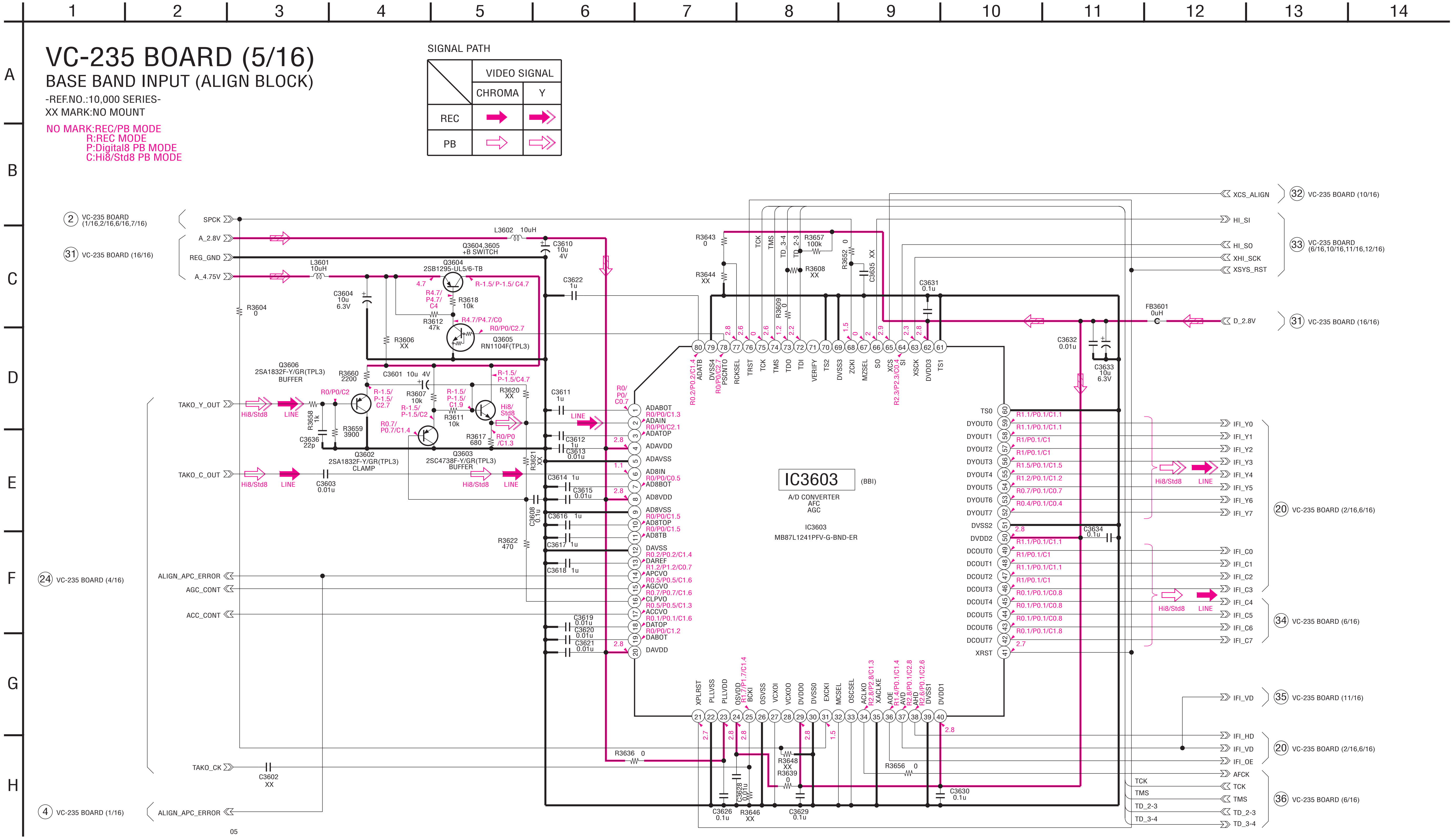
9
10
11
12
13
14
A
B
C
D
E
F
G
H
TAKO_CK
ALIGN_APC_ERROR
24 VC-235 BOARD (5/16)
TAKO_C_OUT
TAKO_Y_OUT
11 VC-235 BOARD (1/16)
TAKO_Y_OUT
12 VC-235 BOARD (2/16)
KINUTA_Y_OUT
KINUTA_C_OUT
25 VC-235 BOARD (10/16)
VIDEO_I/O
S_Y_I/O
S_C_I/O
26 VC-235 BOARD (15/16)
IR_VIDEO
SDC_IN
27 VC-235 BOARD (11/16)
XVIDEO_IN
24 VC-235 BOARD (5/16)
ACC_CONT
AGC_CONT
28 VC-235 BOARD (11/16)
XCS_TAKO
VSP_SO
XVSP_SCK
29 VC-235 BOARD (7/16)
CAIN_Y_OUT
CAIN_C_OUT
30 VC-235 BOARD (16/16)
A_4.75V
D_2.8V
REG_GND
LINE
Hi8/Std8
Q3701
2SC4738F-Y/GR(TPL3)
DC LEVEL
DETECTOR
R3704 100
R3702 4700
R3705 220k
R3701 4700
C3701 0.01u
Q3702 XX
Q3703 XX
Q3704 XX
Q3705 XX
R3706 XX
R3707 XX
R3708 XX
R3709 XX
R3710 XX
R3711 XX
C3702 XX
C3703 XX
R3712 39
R3714 39
R3716 39
R3713 33
R3715 33
R3717 33
S_C_I/O
S_Y_I/O
VIDEO_I/O
IR_VIDEO
DR_C_OUT
DR_Y_OUT
DR_V_OUT
FB3701 0uH
L3701 10uH
L3702 XX
L3703 XX
C3725 XX
R3734 0
R3732 XX
R3731 XX
C3720 XX
C3721 XX
C3722 XX
C3717 1u
C3713 1u
D3702 XX
D3701 XX
R3723 XX
R3719 XX
R3718 XX
R3733 XX
X3701 XX
C3726
C3727 XX
C3736 XX
R3721 22k
C3711 2.2u
C3709 0.033u
C3708 2.2u
C3704 0.22u
C3712 2.2u
C3707 1u
C3710 2.2u
C3705 0.33u
C3706 0.01u
R3722 1k
AGC_CONT
IC3701
AN2225FHQ-EB
IC3701
VIDEO IN/OUT
INPUT_Y_OUT
VREF
INPUT_C_OUT
PLL_GND
BGT_OUT
APC_FIL
EXTAL
XTAL
PLL_VCC
MM_TC3
4FSC_OUT
MM_TC2
IR
MAIN_GND1
Y_IN1
MAIN_GND2
SYNC_SEP_TC
Y_IN2
CLAMP_TC1
Y_IN3
CLAMP_TC2
Y_IN4
Y_GCA_CONT
C_IN1
C_GCA_CONT
AGC_VOUT
C_IN2
MAIN_VCC
C_IN3
D_GND
C_IN4
D_VCC
SI
XSCK
XCS
C_GND
IR_V_OUT
V_VCC
DRV_V_OUT
V_INV
V_GND
Y_GND
DRV_Y_OUT
Y_INV
Y_VCC
C_VCC
DRV_C_OUT
SDC
12
13
14
15
16
17
L3705 10uH
C3734 10u 6.3V
C3735 0.01u
IR_VIDEO
DR_V_OUT
C3732 220u 4V
R3727 1k
C3728 2.2u
R3730 1k
DR_Y_OUT
C3733 220u 4V
R3728 1k
C3729 2.2u
R3729 1k
C3730 0.01u
DR_C_OUT
R3726 10k
C3731 0.01u
R3724 1k
C3715 0.33u
C3718 0.01u
C3719 0.01u
C3723 0.01u
C3724 0.1u
C3714 6.3V 10u
C3716 0.01u
VSP_SO
XVSP_SCK
XCS_TAKO
R0/P0/C2.4
R0.1/P0/C1.8
R1.7/P1.7/C1.5
R0.5/P0.5/C1.6
R0.5/P0.5/C1.6
R0/P0/C1.7
R1.5/P1.5/C2.1
R0/P0/C2.5
R1.3/P1.3/C2.1
R2.2/P2.2/C3.1
R1.3/P1.3/C2.1
R1.1/P1.1/C2.7
R1.5/P1.5/C2.1
R0.5/P0.5/C1.6
R0/P0/C0.5
R1.3/P1.3/C2
R1.3/P1.3/C1.7
R0.1/P0.1/C2.2
R0.5/P0.5/C1.3
R0/P0/C2.2
R2.6/P2.6/C2.2
05

SIGNAL PATH

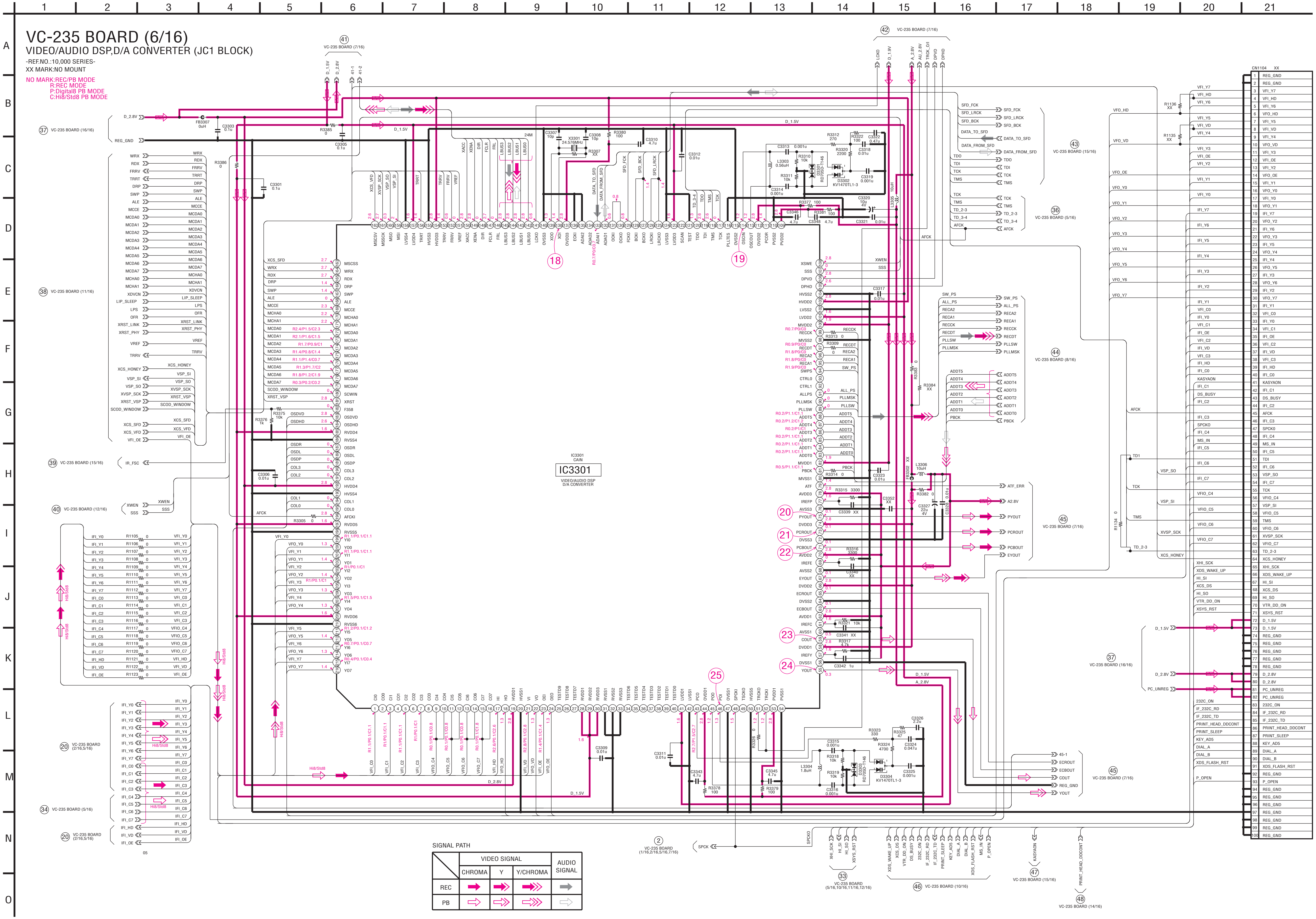
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC	➡	➡➡	➡➡➡
PB	⇨	⇨⇨	⇨⇨⇨

VC-235 (BASE BAND INPUT) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.


VC-235 BOARD (5/16)
BASE BAND INPUT (ALIGN BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
SIGNAL PATH
VIDEO SIGNAL
CHROMA
Y
REC
PB
IC3603 (BBI)
A/D CONVERTER
AFC
AGC
IC3603
MB87L1241PFV-G-BND-ER
VC-235 BOARD (1/16,2/16,6/16,7/16)
VC-235 BOARD (16/16)
VC-235 BOARD (4/16)
VC-235 BOARD (1/16)
VC-235 BOARD (10/16)
VC-235 BOARD (6/16,10/16,11/16,12/16)
VC-235 BOARD (2/16,6/16)
VC-235 BOARD (6/16)
VC-235 BOARD (11/16)
SPCK
A_2.8V
REG_GND
A_4.75V
TAKO_Y_OUT
TAKO_C_OUT
ALIGN_APC_ERROR
AGC_CONT
ACC_CONT
TAKO_CK
XCS_ALIGN
HI_SI
HI_SO
XHI_SCK
XSYS_RST
D_2.8V
IFI_Y0
IFI_Y1
IFI_Y2
IFI_Y3
IFI_Y4
IFI_Y5
IFI_Y6
IFI_Y7
IFI_C0
IFI_C1
IFI_C2
IFI_C3
IFI_C4
IFI_C5
IFI_C6
IFI_C7
IFI_VD
IFI_HD
IFI_OE
AFCK
TCK
TMS
TD_2-3
TD_3-4
Q3604,3605 +B SWITCH
Q3604 2SB1295-UL5/6-TB
Q3605 RN1104F(TPL3)
Q3606 2SA1832F-Y/GR(TPL3) BUFFER
Q3602 2SA1832F-Y/GR(TPL3) CLAMP
Q3603 2SC4738F-Y/GR(TPL3) BUFFER
L3601 10uH
L3602 10uH
FB3601 0uH
Hi8/Std8
LINE
05

VC-235 (VIDEO/AUDIO DSP, D/A CONVERTER) SCHEMATIC DIAGRAM

• See page 4-11 for VC-235 printed wiring board. • See page 4-87, 88 for waveforms.



VC-235 BOARD (6/16)
VIDEO/AUDIO DSP,D/A CONVERTER (JC1 BLOCK)

-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT

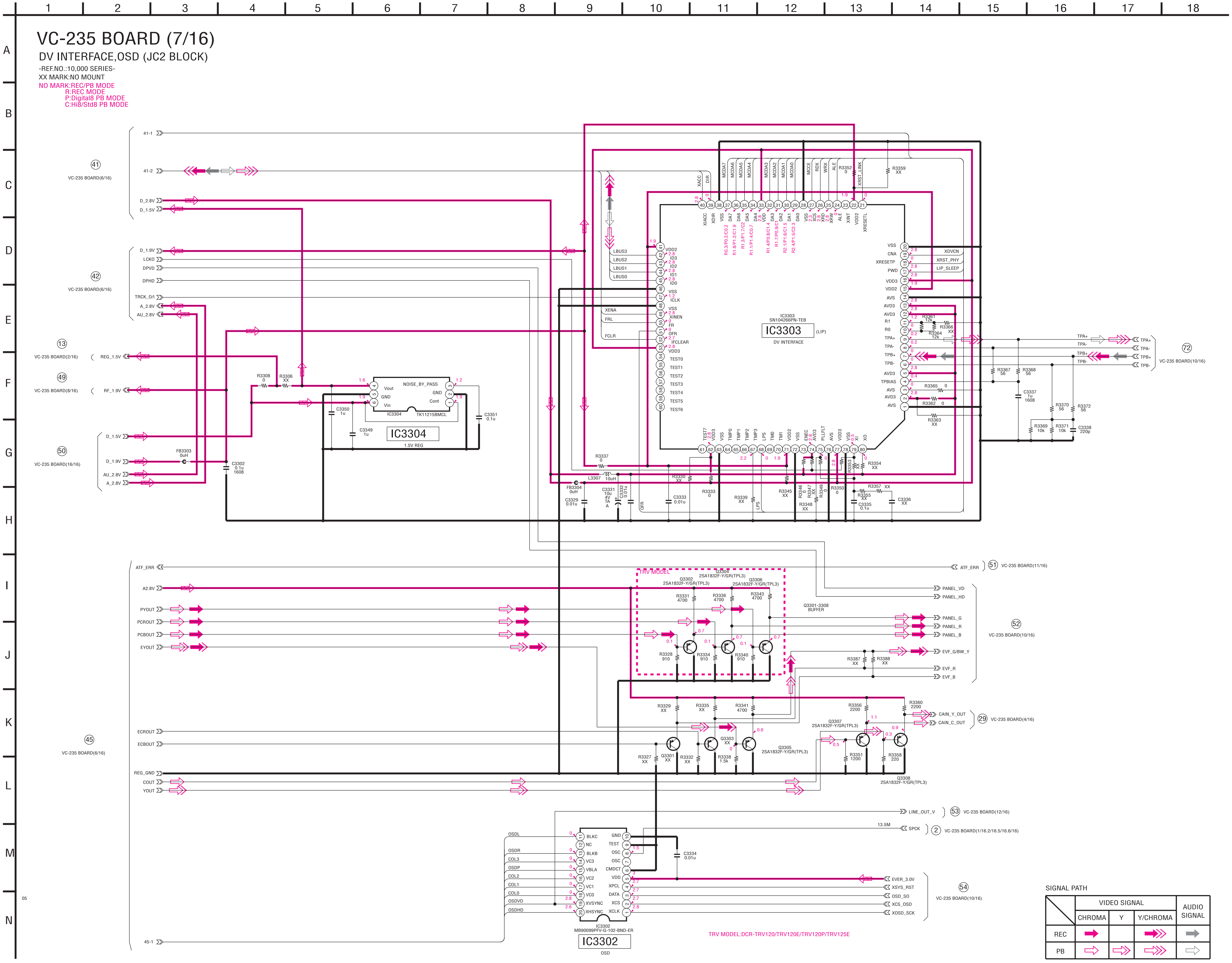
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE

IC3301
CAIN
IC3301
VIDEO/AUDIO DSP
D/A CONVERTER
(37) VC-235 BOARD (16/16)
(38) VC-235 BOARD (11/16)
(39) VC-235 BOARD (15/16)
(40) VC-235 BOARD (12/16)
(41) VC-235 BOARD (7/16)
(42) VC-235 BOARD (7/16)
(43) VC-235 BOARD (15/16)
(36) VC-235 BOARD (5/16)
(44) VC-235 BOARD (8/16)
(45) VC-235 BOARD (7/16)
(37) VC-235 BOARD (16/16)
(45) VC-235 BOARD (7/16)
(20) VC-235 BOARD (2/16,5/16)
(34) VC-235 BOARD (5/16)
(20) VC-235 BOARD (2/16,5/16)
(2) VC-235 BOARD (1/16,2/16,5/16,7/16)
(33) VC-235 BOARD (5/16,10/16,11/16,12/16)
(46) VC-235 BOARD (10/16)
(47) VC-235 BOARD (15/16)
(48) VC-235 BOARD (14/16)
CN1104 XX
X3301 24.576MHz
18
19
20
21
22
23
24
25
Hi8/Std8
D_2.8V
D_1.5V
REG_GND
A_2.8V
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21
A B C D E F G H I J K L M N O

SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡	⇛	⇛	➡
PB	⇨	⇨	⇨	⇨

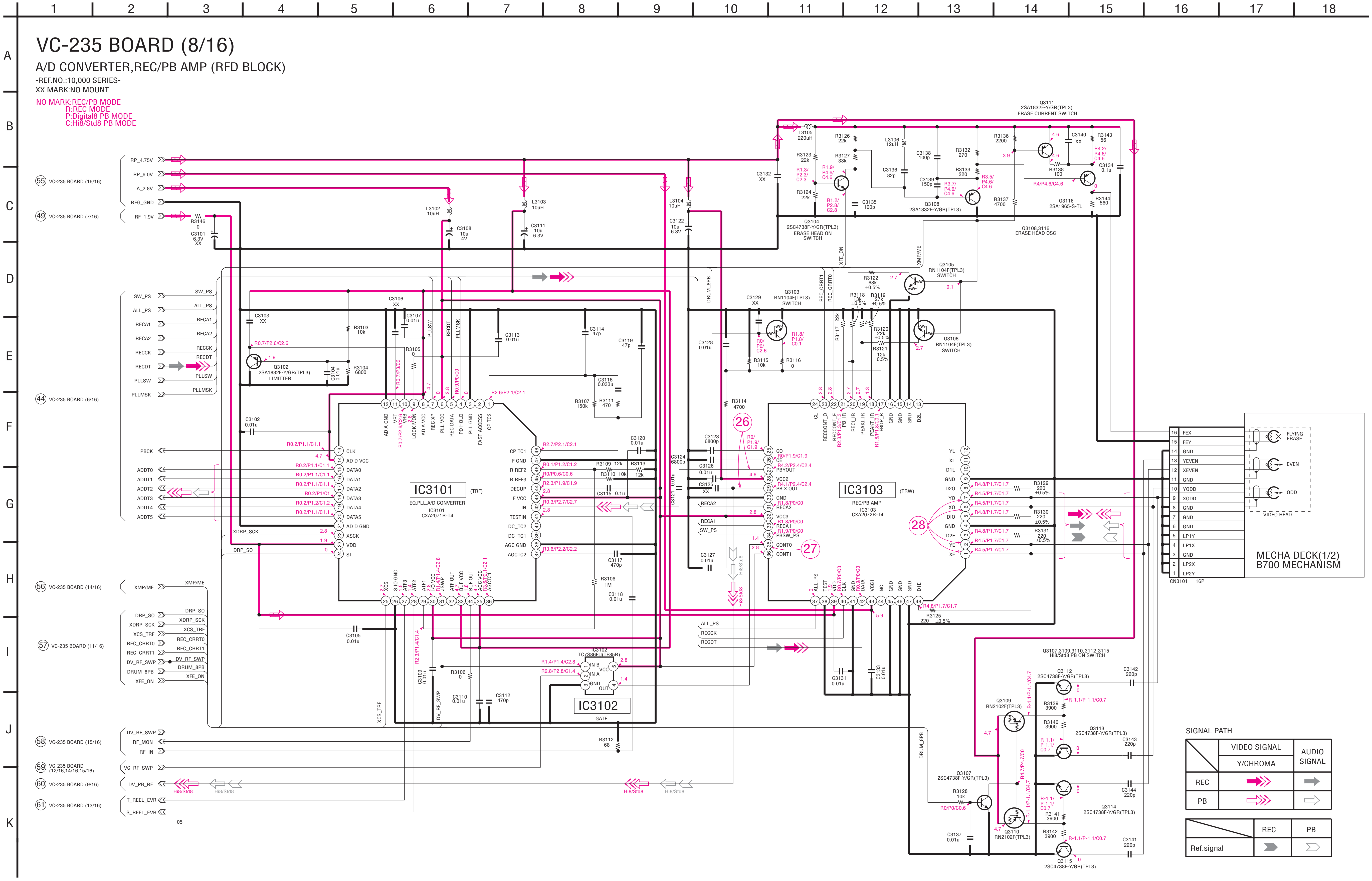
VC-235 (DV INTERFACE, OSD) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.


VC-235 BOARD (7/16)
DV INTERFACE,OSD (JC2 BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
IC3303
SN104266PN-TEB
IC3303
(LIP)
DV INTERFACE
IC3304
TK11215BMCL
IC3304
1.5V REG
NOISE_BY_PASS
IC3302
MB90099PFV-G-102-BND-ER
IC3302
OSD
Q3301-3308
BUFFER
TRV MODEL
TRV MODEL:DCR-TRV120/TRV120E/TRV120P/TRV125E
VC-235 BOARD(6/16)
VC-235 BOARD(2/16)
VC-235 BOARD(8/16)
VC-235 BOARD(16/16)
VC-235 BOARD(10/16)
VC-235 BOARD(11/16)
VC-235 BOARD(4/16)
VC-235 BOARD(12/16)
VC-235 BOARD(1/16.2/16.5/16.6/16)
TPA+
TPA-
TPB+
TPB-
ATF_ERR
PANEL_VD
PANEL_HD
PANEL_G
PANEL_R
PANEL_B
EVF_G/BW_Y
EVF_R
EVF_B
CAIN_Y_OUT
CAIN_C_OUT
LINE_OUT_V
SPCK
EVER_3.0V
XSYS_RST
OSD_SO
XCS_OSD
XOSD_SCK

SIGNAL PATH

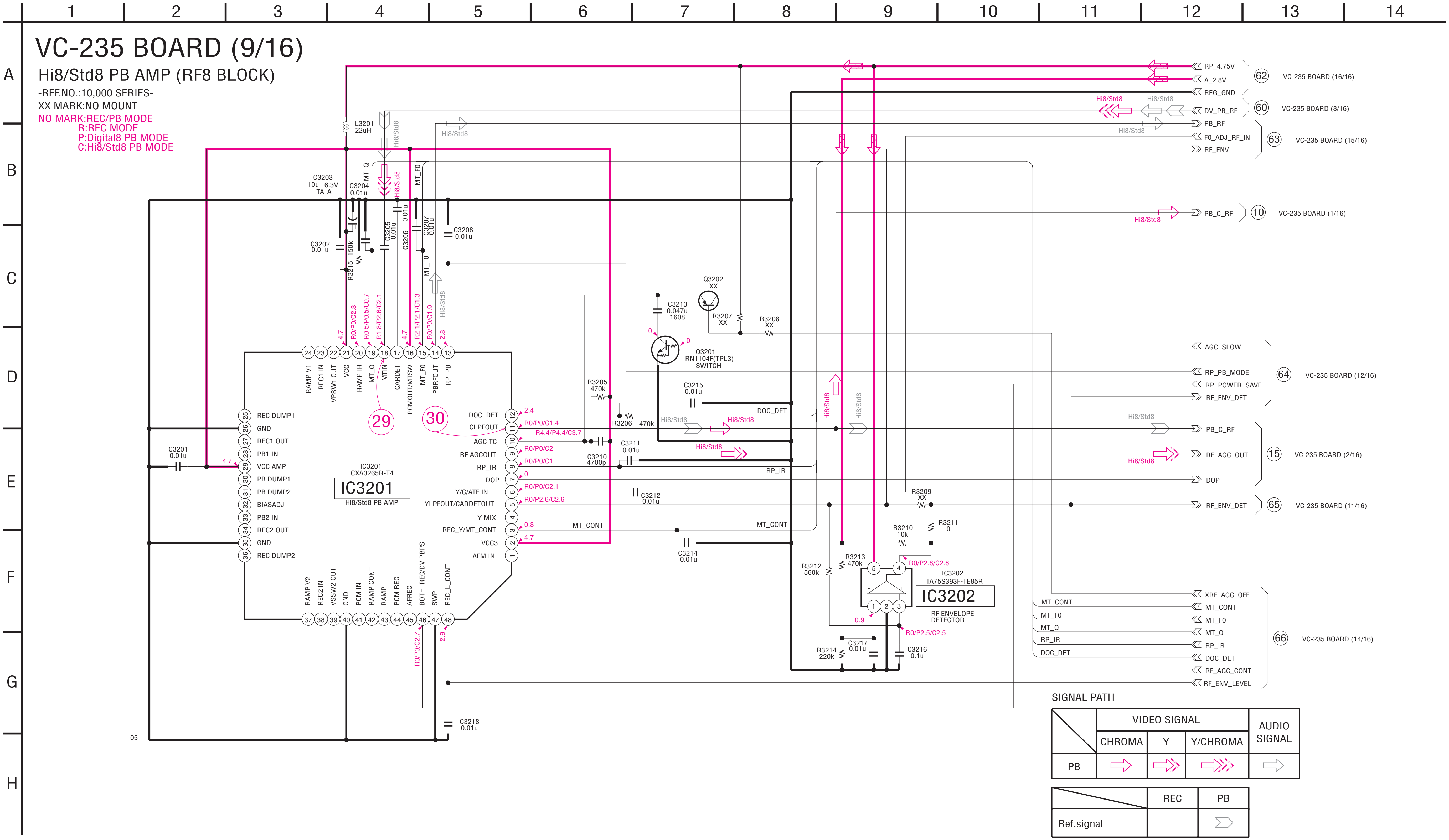
	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
REC	➡		⇛	➡
PB	⇨	⇨	⇨	⇨

VC-235 (A/D CONVERTER, REC/PB AMP) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-88 for waveforms.


VC-235 BOARD (8/16)
A/D CONVERTER,REC/PB AMP (RFD BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
A B C D E F G H I J K
(55) VC-235 BOARD (16/16)
(49) VC-235 BOARD (7/16)
(44) VC-235 BOARD (6/16)
(56) VC-235 BOARD (14/16)
(57) VC-235 BOARD (11/16)
(58) VC-235 BOARD (15/16)
(59) VC-235 BOARD (12/16,14/16,15/16)
(60) VC-235 BOARD (9/16)
(61) VC-235 BOARD (13/16)
RP_4.75V
RP_6.0V
A_2.8V
REG_GND
RF_1.9V
SW_PS
ALL_PS
RECA1
RECA2
RECCK
RECDT
PLLSW
PLLMSK
PBCK
ADDT0
ADDT1
ADDT2
ADDT3
ADDT4
ADDT5
XMP/ME
DRP_SO
XDRP_SCK
XCS_TRF
REC_CRRT0
REC_CRRT1
DV_RF_SWP
DRUM_8PB
XFE_ON
RF_MON
RF_IN
VC_RF_SWP
DV_PB_RF
T_REEL_EVR
S_REEL_EVR
Hi8/Std8
IC3101
(TRF)
EQ,PLL,A/D CONVERTER
IC3101
CXA2071R-T4
IC3102
TC7S66FU(TE85R)
GATE
IC3103
(TRW)
REC/PB AMP
IC3103
CXA2072R-T4
Q3102
2SA1832F-Y/GR(TPL3)
LIMITTER
Q3103
RN1104F(TPL3)
SWITCH
Q3104
2SC4738F-Y/GR(TPL3)
ERASE HEAD ON SWITCH
Q3105
RN1104F(TPL3)
SWITCH
Q3106
RN1104F(TPL3)
SWITCH
Q3108
2SA1832F-Y/GR(TPL3)
Q3108,3116
ERASE HEAD OSC
Q3111
2SA1832F-Y/GR(TPL3)
ERASE CURRENT SWITCH
Q3116
2SA1965-S-TL
Q3107,3109,3110,3112-3115
Hi8/Std8 PB ON SWITCH
Q3107
2SC4738F-Y/GR(TPL3)
Q3109
RN2102F(TPL3)
Q3110
RN2102F(TPL3)
Q3112
2SC4738F-Y/GR(TPL3)
Q3113
2SC4738F-Y/GR(TPL3)
Q3114
2SC4738F-Y/GR(TPL3)
Q3115
2SC4738F-Y/GR(TPL3)
26
27
28
CN3101 16P
FEX
FEY
GND
YEVEN
XEVEN
GND
YODD
XODD
GND
GND
GND
LP1Y
LP1X
GND
LP2X
LP2Y
FLYING ERASE
EVEN
ODD
VIDEO HEAD
MECHA DECK(1/2)
B700 MECHANISM
SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
AUDIO SIGNAL
REC
PB
REC
PB
Ref.signal
05

A/D CONVERTER, REC/PB AMP
VC-235 (8/16)

VC-235 (Hi8/Std8 PB AMP) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board. • See page 4-88 for waveforms.


1
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11
12
13
14
A
B
C
D
E
F
G
H
VC-235 BOARD (9/16)
Hi8/Std8 PB AMP (RF8 BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
IC3201
CXA3265R-T4
IC3201
Hi8/Std8 PB AMP
IC3202
TA75S393F-TE85R
IC3202
RF ENVELOPE DETECTOR
Q3202
XX
Q3201
RN1104F(TPL3)
SWITCH
L3201
22uH
C3201
0.01u
C3202
0.01u
C3203
10u 6.3V
TA A
C3204
0.01u
C3205
0.01u
C3206
0.01u
C3207
0.01u
C3208
0.01u
C3210
4700p
C3211
0.01u
C3212
0.01u
C3213
0.047u
1608
C3214
0.01u
C3215
0.01u
C3216
0.1u
C3217
0.01u
C3218
0.01u
R3205
470k
R3206
470k
R3207
XX
R3208
XX
R3209
XX
R3210
10k
R3211
0
R3212
560k
R3213
470k
R3214
220k
R3215
150k
29
30
RAMP V1
REC1 IN
VPSW1 OUT
VCC
RAMP IR
MT_Q
MTIN
CARDET
PCMOUT/MTSW
MT_F0
PBRFOUT
RP_PB
REC DUMP1
GND
REC1 OUT
PB1 IN
VCC AMP
PB DUMP1
PB DUMP2
BIASADJ
PB2 IN
REC2 OUT
GND
REC DUMP2
RAMP V2
REC2 IN
VSSW2 OUT
GND
PCM IN
RAMP CONT
RAMP
PCM REC
AFREC
BOTH_REC/DV PBPS
SWP
REC_L_CONT
DOC_DET
CLPFOUT
AGC TC
RF AGCOUT
RP_IR
DOP
Y/C/ATF IN
YLPFOUT/CARDETOUT
Y MIX
REC_Y/MT_CONT
VCC3
AFM IN
MT_CONT
RP_IR
Hi8/Std8
RP_4.75V
A_2.8V
REG_GND
DV_PB_RF
PB_RF
F0_ADJ_RF_IN
RF_ENV
PB_C_RF
AGC_SLOW
RP_PB_MODE
RP_POWER_SAVE
RF_ENV_DET
PB_C_RF
RF_AGC_OUT
DOP
RF_ENV_DET
XRF_AGC_OFF
MT_CONT
MT_F0
MT_Q
RP_IR
DOC_DET
RF_AGC_CONT
RF_ENV_LEVEL
62
VC-235 BOARD (16/16)
60
VC-235 BOARD (8/16)
63
VC-235 BOARD (15/16)
10
VC-235 BOARD (1/16)
64
VC-235 BOARD (12/16)
15
VC-235 BOARD (2/16)
65
VC-235 BOARD (11/16)
66
VC-235 BOARD (14/16)
05

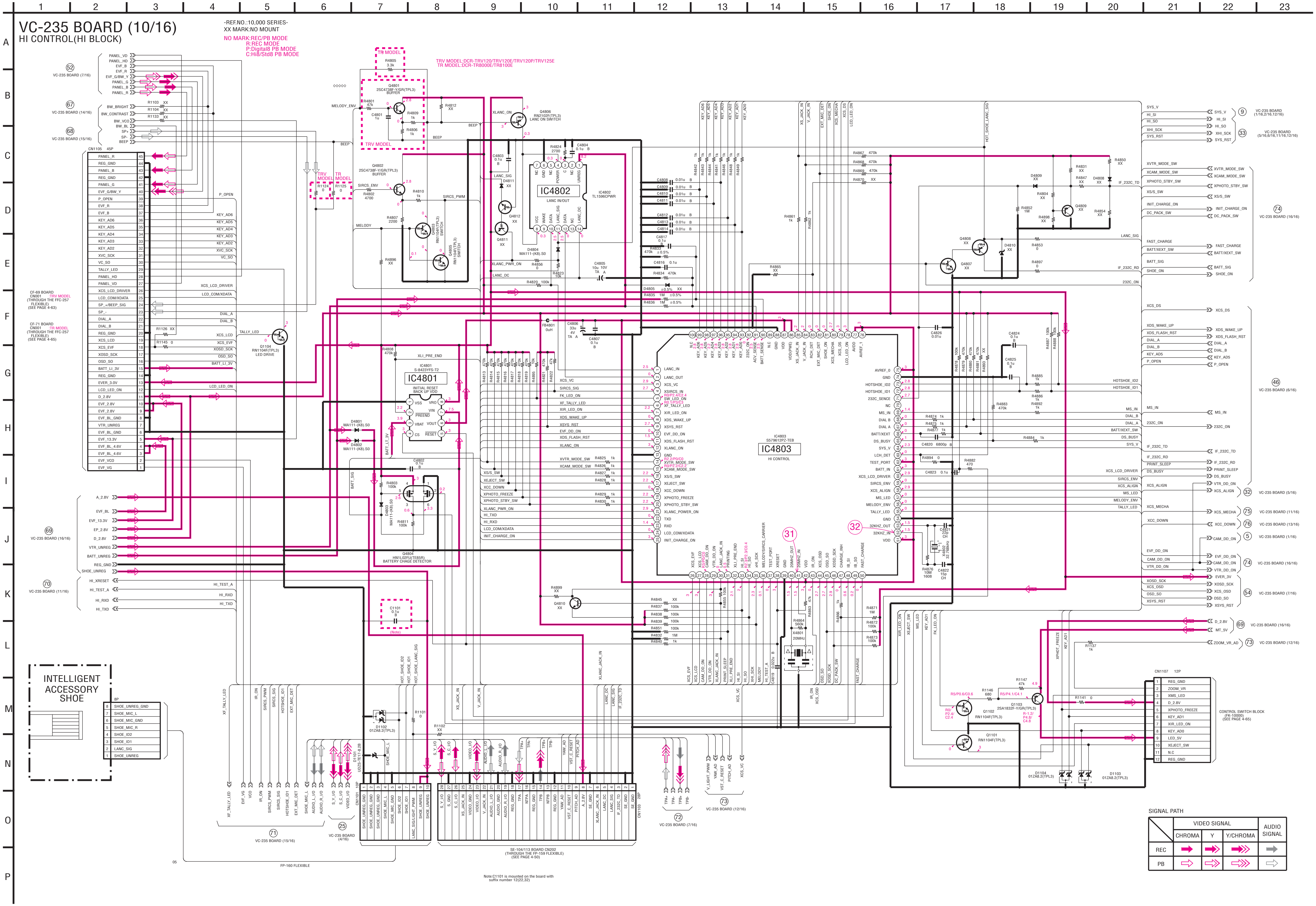
SIGNAL PATH

	VIDEO SIGNAL			AUDIO SIGNAL
	CHROMA	Y	Y/CHROMA	
PB	⇨	⇨	⇨	⇨

	REC	PB
Ref.signal		▷

VC-235 (HI CONTROL) SCHEMATIC DIAGRAM

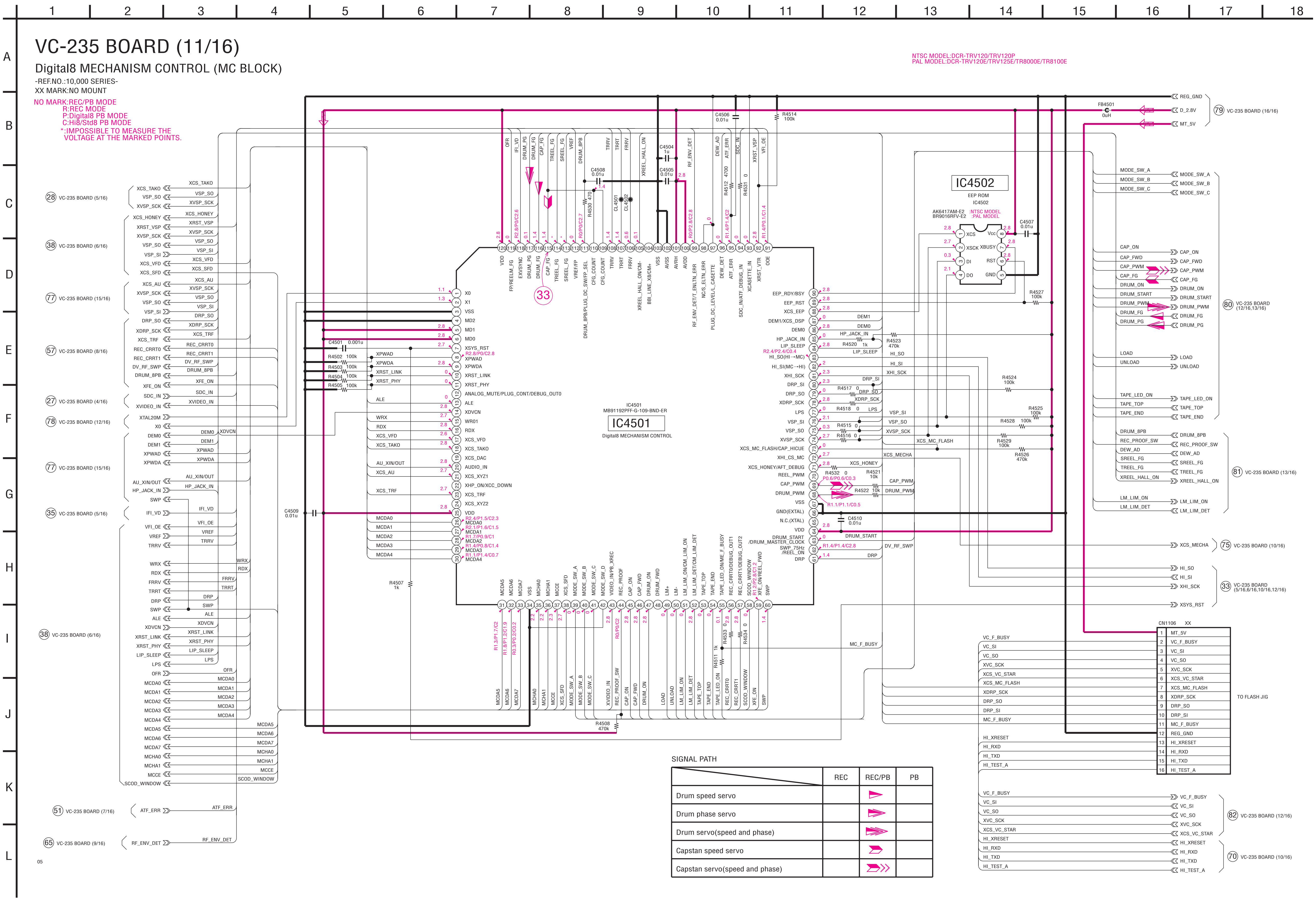
• See page 4-11 for VC-235 printed wiring board. • See page 4-88 for waveforms.


VC-235 BOARD (10/16)
HI CONTROL(HI BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
TR MODEL
TRV MODEL
TRV MODEL:DCR-TRV120/TRV120E/TRV120P/TRV125E
TR MODEL:DCR-TR8000E/TR8100E
IC4801 S-8423YFS-T2
INITIAL RESET BACK UP VDD
IC4802 TL1596CPWR
LANC IN/OUT
IC4803 S579612PZ-TEB
HI CONTROL
Q4801 2SC4738F-Y/GR(TPL3) BUFFER
Q4802 2SC4738F-Y/GR(TPL3) BUFFER
Q4806 RN2102F(TPL3) LANC ON SWITCH
Q1104 RN1104F(TPL3) LED DRIVE
D4803 HN1L02FU(TE85R) BATTERY CHAGE DETECTOR
Q1101 RN1104F(TPL3)
Q1102 RN1104F(TPL3)
Q1103 2SA1832F-Y/GR(TPL3)
D1102 01ZA8.2(TPL3)
D1103 01ZA8.2(TPL3)
D1104 01ZA8.2(TPL3)
X4801 20MHz
CN1105 45P
CN1107 12P
CN1103 28P
CN1101 10P
VC-235 BOARD (7/16)
VC-235 BOARD (14/16)
VC-235 BOARD (15/16)
VC-235 BOARD (16/16)
VC-235 BOARD (11/16)
VC-235 BOARD (1/16,2/16,12/16)
VC-235 BOARD (5/16,6/16,11/16,12/16)
VC-235 BOARD (6/16)
VC-235 BOARD (5/16)
VC-235 BOARD (13/16)
VC-235 BOARD (1/16)
VC-235 BOARD (12/16)
VC-235 BOARD (4/16)
CF-69 BOARD CN001 (THROUGH THE FFC-257 FLEXIBLE) (SEE PAGE 4-63)
CF-71 BOARD CN001 (THROUGH THE FFC-257 FLEXIBLE) (SEE PAGE 4-65)
INTELLIGENT ACCESSORY SHOE
SE-104/113 BOARD CN202 (THROUGH THE FP-159 FLEXIBLE) (SEE PAGE 4-50)
FP-160 FLEXIBLE
CONTROL SWITCH BLOCK (FK-10000) (SEE PAGE 4-65)
Note:C1101 is mounted on the board with suffix number 12(22.32)
SIGNAL PATH
VIDEO SIGNAL
CHROMA
Y
Y/CHROMA
AUDIO SIGNAL
REC
PB

HI CONTROL
VC-235 (10/16)

VC-235 (Digital8 MECHANISM CONTROL) SCHEMATIC DIAGRAM

• See page 4-11 for VC-235 printed wiring board. • See page 4-88 for waveforms.


VC-235 BOARD (11/16)
Digital8 MECHANISM CONTROL (MC BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.
NTSC MODEL:DCR-TRV120/TRV120P
PAL MODEL:DCR-TRV120E/TRV125E/TR8000E/TR8100E
IC4501
MB91192PFF-G-109-BND-ER
IC4501
Digital8 MECHANISM CONTROL
IC4502
EEP ROM
IC4502
AK6417AM-E2 :NTSC MODEL
BR9016RFV-E2 :PAL MODEL
CN1106 XX
TO FLASH JIG
VC-235 BOARD (5/16)
VC-235 BOARD (6/16)
VC-235 BOARD (15/16)
VC-235 BOARD (8/16)
VC-235 BOARD (4/16)
VC-235 BOARD (12/16)
VC-235 BOARD (7/16)
VC-235 BOARD (9/16)
VC-235 BOARD (16/16)
VC-235 BOARD (12/16,13/16)
VC-235 BOARD (13/16)
VC-235 BOARD (10/16)
VC-235 BOARD (5/16,6/16,10/16,12/16)
REG_GND
D_2.8V
MT_5V
MODE_SW_A
MODE_SW_B
MODE_SW_C
CAP_ON
CAP_FWD
CAP_PWM
CAP_FG
DRUM_ON
DRUM_START
DRUM_PWM
DRUM_FG
DRUM_PG
LOAD
UNLOAD
TAPE_LED_ON
TAPE_TOP
TAPE_END
DRUM_8PB
REC_PROOF_SW
DEW_AD
SREEL_FG
TREEL_FG
XREEL_HALL_ON
LM_LIM_ON
LM_LIM_DET
XCS_MECHA
HI_SO
HI_SI
XHI_SCK
XSYS_RST
05

SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▷	
Drum phase servo		▷	
Drum servo(speed and phase)		▷▷	
Capstan speed servo		▷	
Capstan servo(speed and phase)		▷▷	

VC-235 (CAMERA CONTROL, Hi8/Std8 MECHANISM CONTROL) SCHEMATIC DIAGRAM

• See page 4-11 for VC-235 printed wiring board. • See page 4-88 for waveforms.

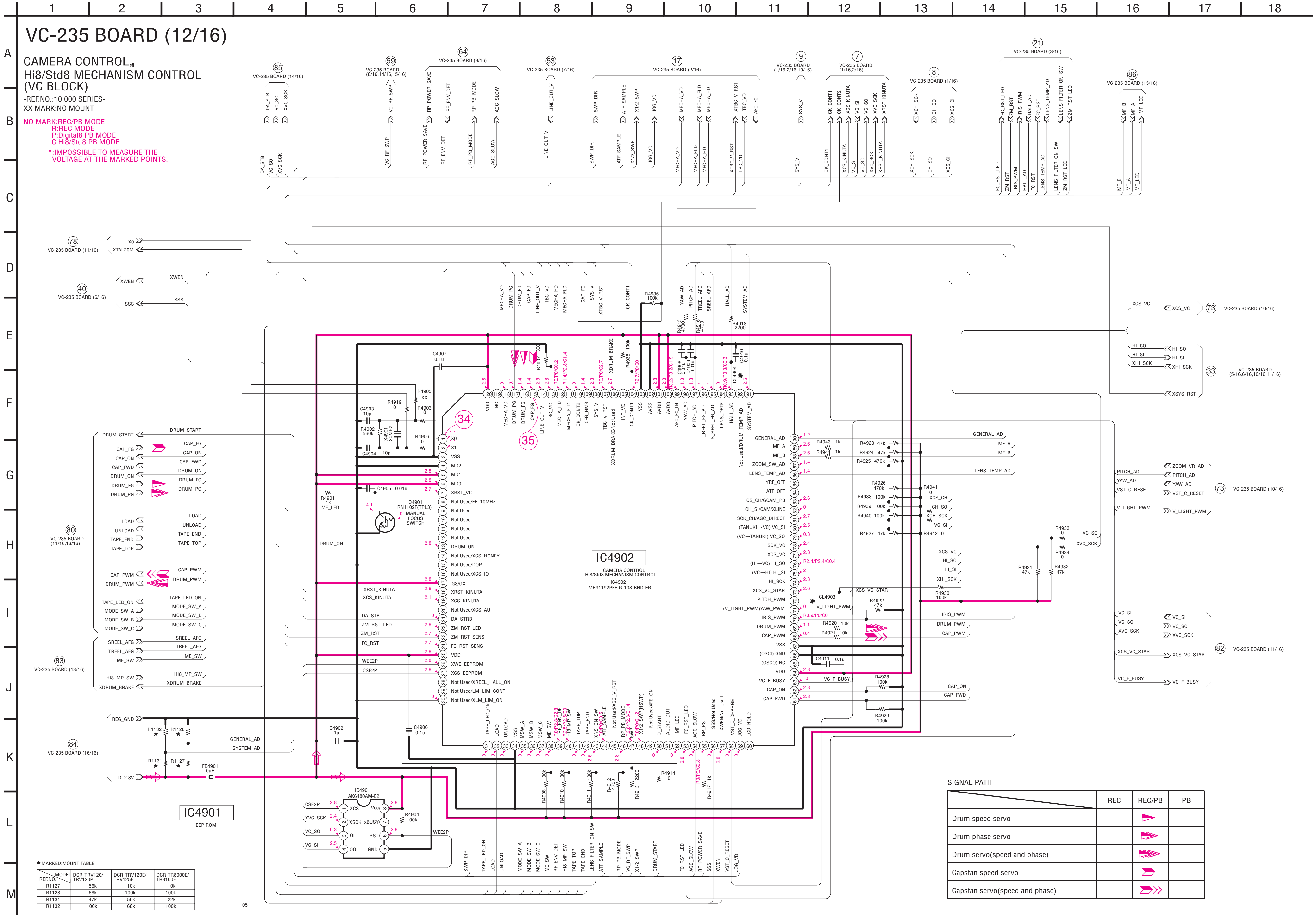
VC-235 BOARD (12/16)

CAMERA CONTROL,
Hi8/Std8 MECHANISM CONTROL
(VC BLOCK)

-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT

NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE

*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18
A B C D E F G H I J K L M
IC4902
CAMERA CONTROL
Hi8/Std8 MECHANISM CONTROL
IC4902
MB91192PFF-G-108-BND-ER
IC4901
EEP ROM
IC4901
AK6480AM-E2
VC-235 BOARD (14/16)
VC-235 BOARD (8/16,14/16,15/16)
VC-235 BOARD (9/16)
VC-235 BOARD (7/16)
VC-235 BOARD (2/16)
VC-235 BOARD (1/16,2/16,10/16)
VC-235 BOARD (1/16,2/16)
VC-235 BOARD (1/16)
VC-235 BOARD (3/16)
VC-235 BOARD (15/16)
VC-235 BOARD (11/16)
VC-235 BOARD (6/16)
VC-235 BOARD (11/16,13/16)
VC-235 BOARD (13/16)
VC-235 BOARD (16/16)
VC-235 BOARD (10/16)
VC-235 BOARD (5/16,6/16,10/16,11/16)
VC-235 BOARD (11/16)
X4901 20MHz
Q4901 RN1102F(TPL3) MANUAL FOCUS SWITCH
FB4901 0uH
DRUM_START
CAP_FG
CAP_ON
CAP_FWD
DRUM_ON
DRUM_FG
DRUM_PG
LOAD
UNLOAD
TAPE_END
TAPE_TOP
CAP_PWM
DRUM_PWM
TAPE_LED_ON
MODE_SW_A
MODE_SW_B
MODE_SW_C
SREEL_AFG
TREEL_AFG
ME_SW
HI8_MP_SW
XDRUM_BRAKE
REG_GND
D_2.8V
GENERAL_AD
SYSTEM_AD
XCS_VC
HI_SO
HI_SI
XHI_SCK
XSYS_RST
ZOOM_VR_AD
PITCH_AD
YAW_AD
VST_C_RESET
V_LIGHT_PWM
VC_SI
VC_SO
XVC_SCK
XCS_VC_STAR
VC_F_BUSY
MF_A
MF_B
LENS_TEMP_AD

★MARKED:MOUNT TABLE

REF.NO. \ MODEL	DCR-TRV120/ TRV120P	DCR-TRV120E/ TRV125E	DCR-TR8000E/ TR8100E
R1127	56k	10k	10k
R1128	68k	100k	100k
R1131	47k	56k	22k
R1132	100k	68k	100k

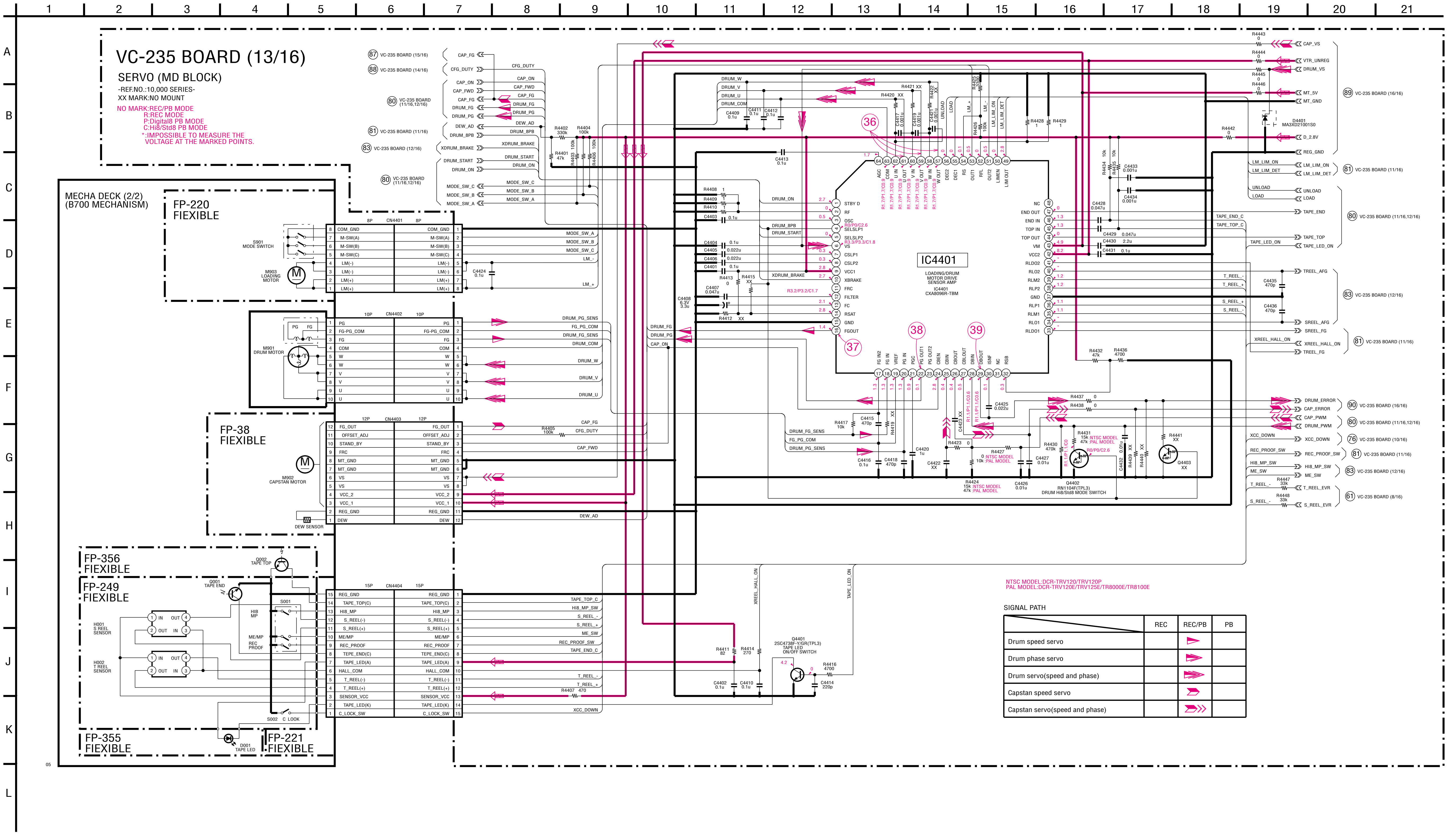
05

SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▶	
Drum phase servo		▶	
Drum servo(speed and phase)		▶▶	
Capstan speed servo		❯	
Capstan servo(speed and phase)		❯❯❯	

FP-38, FP-220, FP-221, FP-249, FP-355, FP-356 (MECHA DECK), VC-235 (SERVO) SCHEMATIC DIAGRAM

- See page 4-11 for VC-235 printed wiring board.
- See page 4-88, 89 for waveforms.


VC-235 BOARD (13/16)
SERVO (MD BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
*:IMPOSSIBLE TO MEASURE THE VOLTAGE AT THE MARKED POINTS.
MECHA DECK (2/2) (B700 MECHANISM)
FP-220 FLEXIBLE
FP-38 FLEXIBLE
FP-356 FLEXIBLE
FP-249 FLEXIBLE
FP-355 FLEXIBLE
FP-221 FLEXIBLE
S901 MODE SWITCH
M903 LOADING MOTOR
M901 DRUM MOTOR
M902 CAPSTAN MOTOR
DEW SENSOR
Q002 TAPE TOP
Q001 TAPE END
H001 S REEL SENSOR
H002 T REEL SENSOR
S001 HI8 MP ME/MP REC PROOF
S002 C LOOK
D001 TAPE LED
CN4401 8P
CN4402 10P
CN4403 12P
CN4404 15P
IC4401
LOADING/DRUM MOTOR DRIVE SENSOR AMP IC4401 CXA8096R-T8M
Q4401 2SC4738F-Y/GR(TPL3) TAPE LED ON/OFF SWITCH
Q4402 RN1104F(TPL3) DRUM Hi8/Std8 MODE SWITCH
D4401 MA3XD21001S0
87 VC-235 BOARD (15/16)
88 VC-235 BOARD (14/16)
80 VC-235 BOARD (11/16,12/16)
81 VC-235 BOARD (11/16)
83 VC-235 BOARD (12/16)
89 VC-235 BOARD (16/16)
90 VC-235 BOARD (16/16)
76 VC-235 BOARD (10/16)
61 VC-235 BOARD (8/16)
36
37
38
39
05

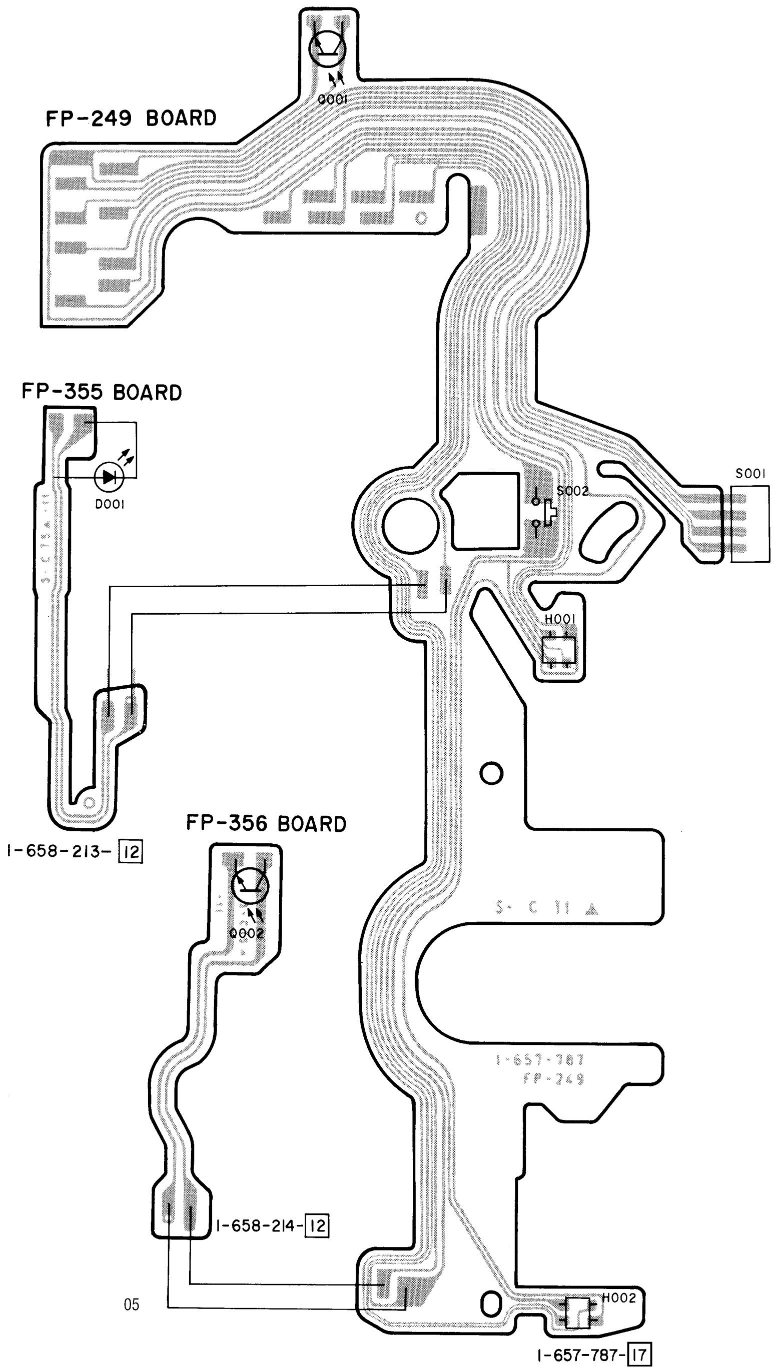
NTSC MODEL:DCR-TRV120/TRV120P
PAL MODEL:DCR-TRV120E/TRV125E/TR8000E/TR8100E

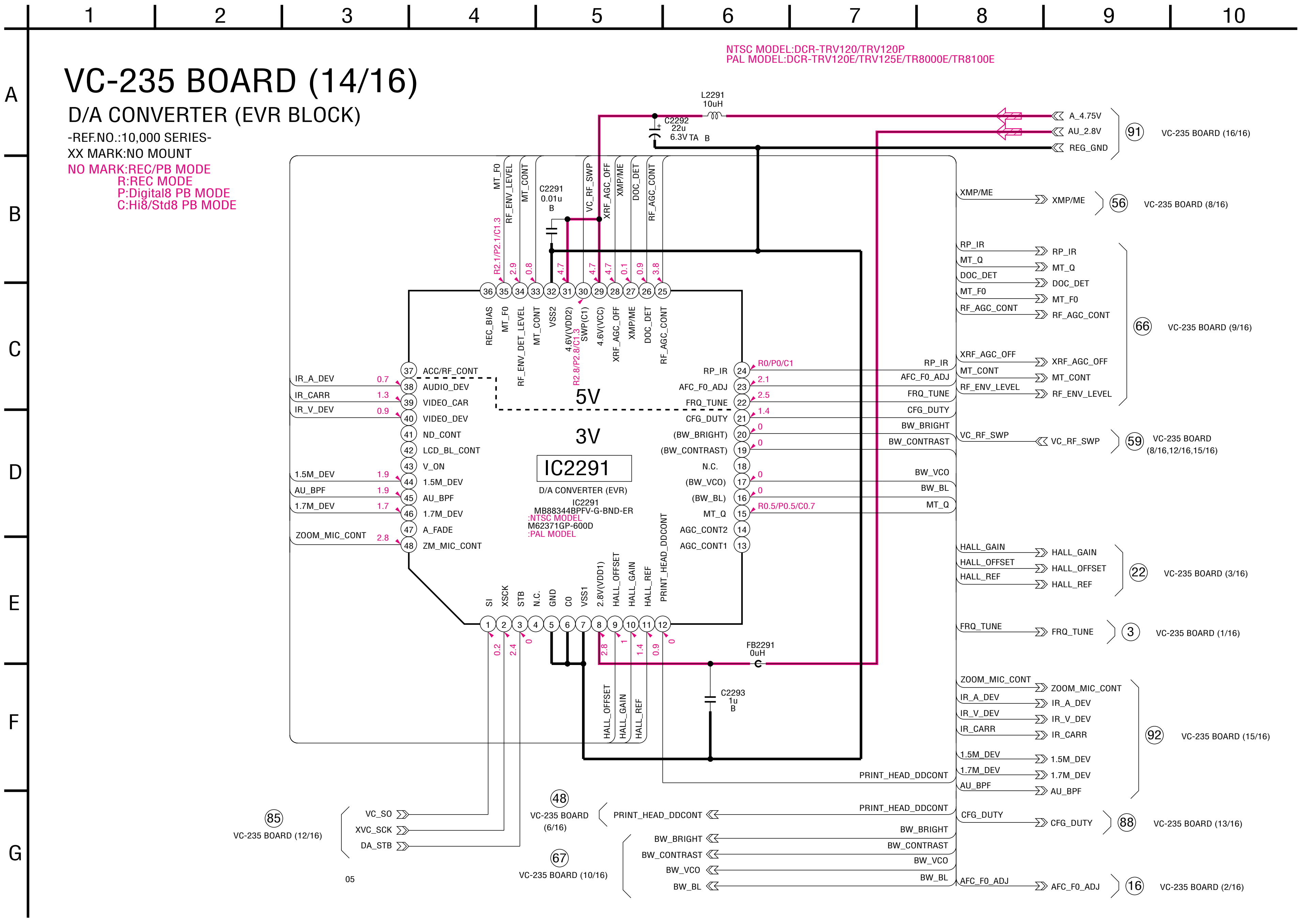
SIGNAL PATH

	REC	REC/PB	PB
Drum speed servo		▷	
Drum phase servo		⇨	
Drum servo(speed and phase)		⇛	
Capstan speed servo		➢	
Capstan servo(speed and phase)		➢»	

FP-249, FP-355, FP-356 (MECHA DECK) PRINTED WIRING BOARDS AND VC-235 (D/A CONVERTER) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.

– Ref. No.: FP-249, FP-355, FP-356 flexible board; 10,000 series –


FP-249 BOARD
Q001
FP-355 BOARD
D001
S002
S001
H001
1-658-213- 12
FP-356 BOARD
Q002
1-658-214- 12
H002
1-657-787- 17
05
1-657-787
FP-249
S- C 11


1
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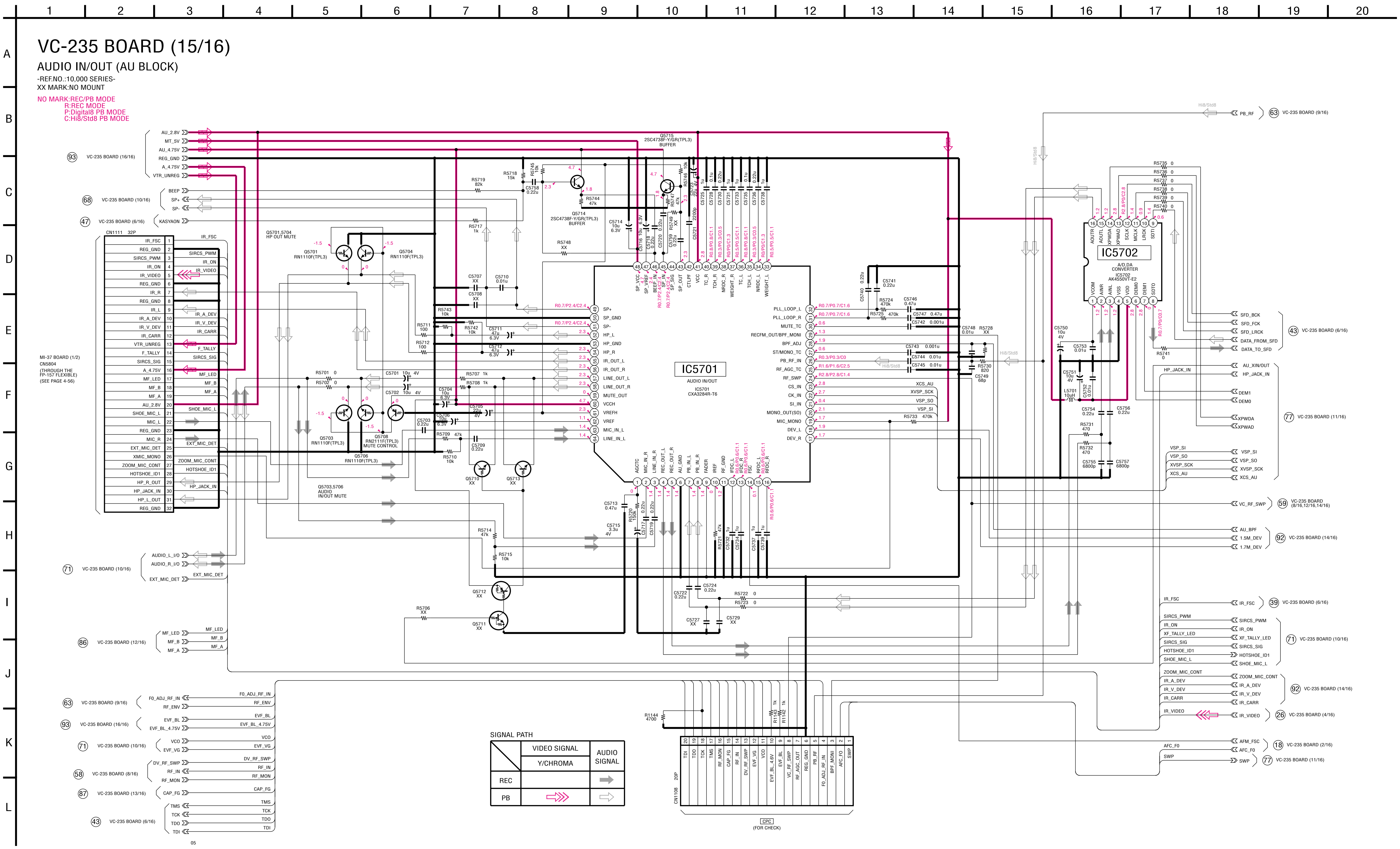
6
7
8
9
10
A
B
C
D
E
F
G
VC-235 BOARD (14/16)
D/A CONVERTER (EVR BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
NTSC MODEL:DCR-TRV120/TRV120P
PAL MODEL:DCR-TRV120E/TRV125E/TR8000E/TR8100E
L2291 10uH
C2292 22u 6.3V TA B
C2291 0.01u B
C2293 1u B
FB2291 0uH
IC2291
D/A CONVERTER (EVR)
IC2291
MB88344BPFV-G-BND-ER
:NTSC MODEL
M62371GP-600D
:PAL MODEL
5V
3V
A_4.75V
AU_2.8V
REG_GND
91 VC-235 BOARD (16/16)
XMP/ME
56 VC-235 BOARD (8/16)
RP_IR
MT_Q
DOC_DET
MT_F0
RF_AGC_CONT
66 VC-235 BOARD (9/16)
XRF_AGC_OFF
MT_CONT
RF_ENV_LEVEL
VC_RF_SWP
59 VC-235 BOARD (8/16,12/16,15/16)
HALL_GAIN
HALL_OFFSET
HALL_REF
22 VC-235 BOARD (3/16)
FRQ_TUNE
3 VC-235 BOARD (1/16)
ZOOM_MIC_CONT
IR_A_DEV
IR_V_DEV
IR_CARR
1.5M_DEV
1.7M_DEV
AU_BPF
92 VC-235 BOARD (15/16)
CFG_DUTY
88 VC-235 BOARD (13/16)
AFC_F0_ADJ
16 VC-235 BOARD (2/16)
PRINT_HEAD_DDCONT
48 VC-235 BOARD (6/16)
BW_BRIGHT
BW_CONTRAST
BW_VCO
BW_BL
67 VC-235 BOARD (10/16)
VC_SO
XVC_SCK
DA_STB
85 VC-235 BOARD (12/16)
05
36 REC_BIAS
35 MT_F0
34 RF_ENV_DET_LEVEL
33 MT_CONT
32 VSS2
31 4.6V(VDD2)
30 SWP(C1)
29 4.6V(VCC)
28 XRF_AGC_OFF
27 XMP/ME
26 DOC_DET
25 RF_AGC_CONT
37 ACC/RF_CONT
38 AUDIO_DEV
39 VIDEO_CAR
40 VIDEO_DEV
41 ND_CONT
42 LCD_BL_CONT
43 V_ON
44 1.5M_DEV
45 AU_BPF
46 1.7M_DEV
47 A_FADE
48 ZM_MIC_CONT
24 RP_IR
23 AFC_F0_ADJ
22 FRQ_TUNE
21 CFG_DUTY
20 (BW_BRIGHT)
19 (BW_CONTRAST)
18 N.C.
17 (BW_VCO)
16 (BW_BL)
15 MT_Q
14 AGC_CONT2
13 AGC_CONT1
1 SI
2 XSCK
3 STB
4 N.C.
5 GND
6 C0
7 VSS1
8 2.8V(VDD1)
9 HALL_OFFSET
10 HALL_GAIN
11 HALL_REF
12 PRINT_HEAD_DDCONT
R2.1/P2.1/C1.3
2.9
0.8
4.7
R2.8/P2.8/C1.3
4.7
4.7
0.1
0.9
3.8
0.7
1.3
0.9
1.9
1.9
1.7
2.8
R0/P0/C1
2.1
2.5
1.4
0
0
0
0
R0.5/P0.5/C0.7
0.2
2.4
0
2.8
1
1.4
0.9
0

VC-235 (AUDIO IN/OUT) SCHEMATIC DIAGRAM • See page 4-11 for VC-235 printed wiring board.

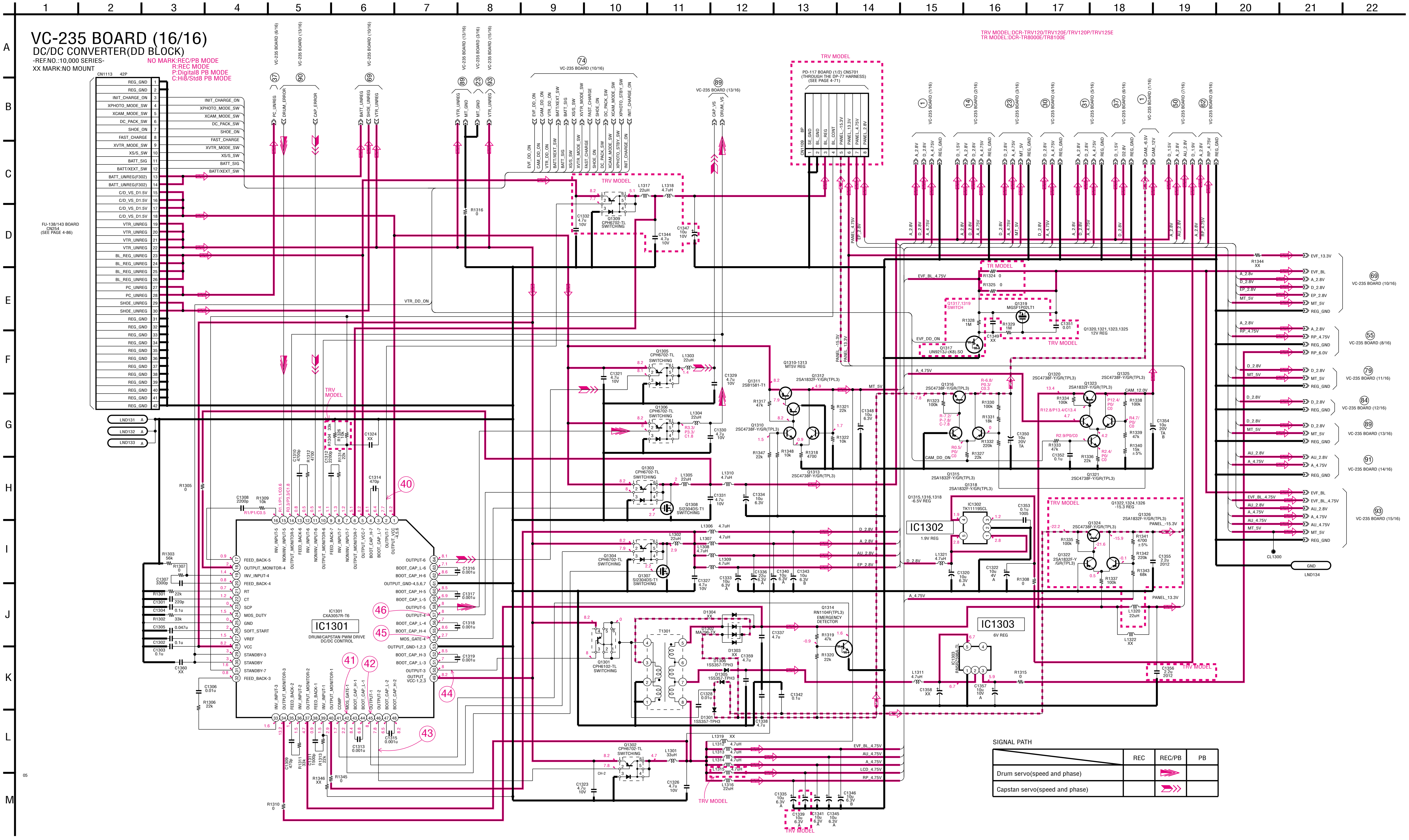

VC-235 BOARD (15/16)
AUDIO IN/OUT (AU BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
IC5701
AUDIO IN/OUT
IC5701
CXA3284R-T6
IC5702
A/D,DA CONVERTER
IC5702
AK4550VT-E2
CN1111 32P
MI-37 BOARD (1/2) CN5804 (THROUGH THE FP-157 FLEXIBLE) (SEE PAGE 4-56)
Q5701,5704 HP OUT MUTE
Q5701 RN1110F(TPL3)
Q5704 RN1110F(TPL3)
Q5703 RN1110F(TPL3)
Q5706 RN1110F(TPL3)
Q5708 RN2111F(TPL3) MUTE CONTROL
Q5703,5706 AUDIO IN/OUT MUTE
Q5714 2SC4738F-Y/GR(TPL3) BUFFER
Q5715 2SC4738F-Y/GR(TPL3) BUFFER
CN1108 20P
CPC (FOR CHECK)
VC-235 BOARD (16/16)
VC-235 BOARD (10/16)
VC-235 BOARD (6/16)
VC-235 BOARD (12/16)
VC-235 BOARD (9/16)
VC-235 BOARD (8/16)
VC-235 BOARD (13/16)
VC-235 BOARD (11/16)
VC-235 BOARD (14/16)
VC-235 BOARD (4/16)
VC-235 BOARD (2/16)
VC-235 BOARD (8/16,12/16,14/16)
SIGNAL PATH

	VIDEO SIGNAL Y/CHROMA	AUDIO SIGNAL
REC	⇒	➡
PB	⇒	⇨

AUDIO IN/OUT
VC-235 (15/16)

VC-235 (DC/DC CONVERTER) SCHEMATIC DIAGRAM

- See page 4-11 for VC-235 printed wiring board.
- See page 4-89 for waveforms.


VC-235 BOARD (16/16)
DC/DC CONVERTER(DD BLOCK)
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R:REC MODE
P:Digital8 PB MODE
C:Hi8/Std8 PB MODE
TRV MODEL:DCR-TRV120/TRV120E/TRV120P/TRV125E
TR MODEL:DCR-TR8000E/TR8100E
CN1113 42P
FU-138/143 BOARD CN254 (SEE PAGE 4-86)
PD-117 BOARD (1/2) CN5701 (THROUGH THE DP-77 HARNESS) (SEE PAGE 4-71)
TRV MODEL
TR MODEL
IC1301 CXA3057R-T6 DRUM/CAPSTAN PWM DRIVE DC/DC CONTROL
IC1302 TK11119SCL 1.9V REG
IC1303 6V REG
T1301
Q1301 CPH6102-TL SWITCHING
Q1303 CPH6702-TL SWITCHING
Q1304 CPH6702-TL SWITCHING
Q1305 CPH6702-TL SWITCHING
Q1306 CPH6702-TL SWITCHING
Q1309 CPH6702-TL SWITCHING
Q1302 CPH6702-TL SWITCHING
Q1307 SI2304DS-T1 SWITCHING
Q1308 SI2304DS-T1 SWITCHING
Q1310-1313 MT5V REG
Q1314 RN1104F(TPL3) EMERGENCY DETECTOR
Q1315,1316,1318 -6.5V REG
Q1317 UN9213J-(K8).SO
Q1319 MGSF1P02LT1
Q1320,1321,1323,1325 12V REG
Q1322,1324,1326 -15.3 REG
VC-235 BOARD (1/16)
VC-235 BOARD (2/16)
VC-235 BOARD (3/16)
VC-235 BOARD (4/16)
VC-235 BOARD (5/16)
VC-235 BOARD (6/16)
VC-235 BOARD (7/16)
VC-235 BOARD (8/16)
VC-235 BOARD (9/16)
VC-235 BOARD (10/16)
VC-235 BOARD (11/16)
VC-235 BOARD (12/16)
VC-235 BOARD (13/16)
VC-235 BOARD (14/16)
VC-235 BOARD (15/16)
LND131
LND132
LND133
LND134
CL1300
GND
05

SIGNAL PATH

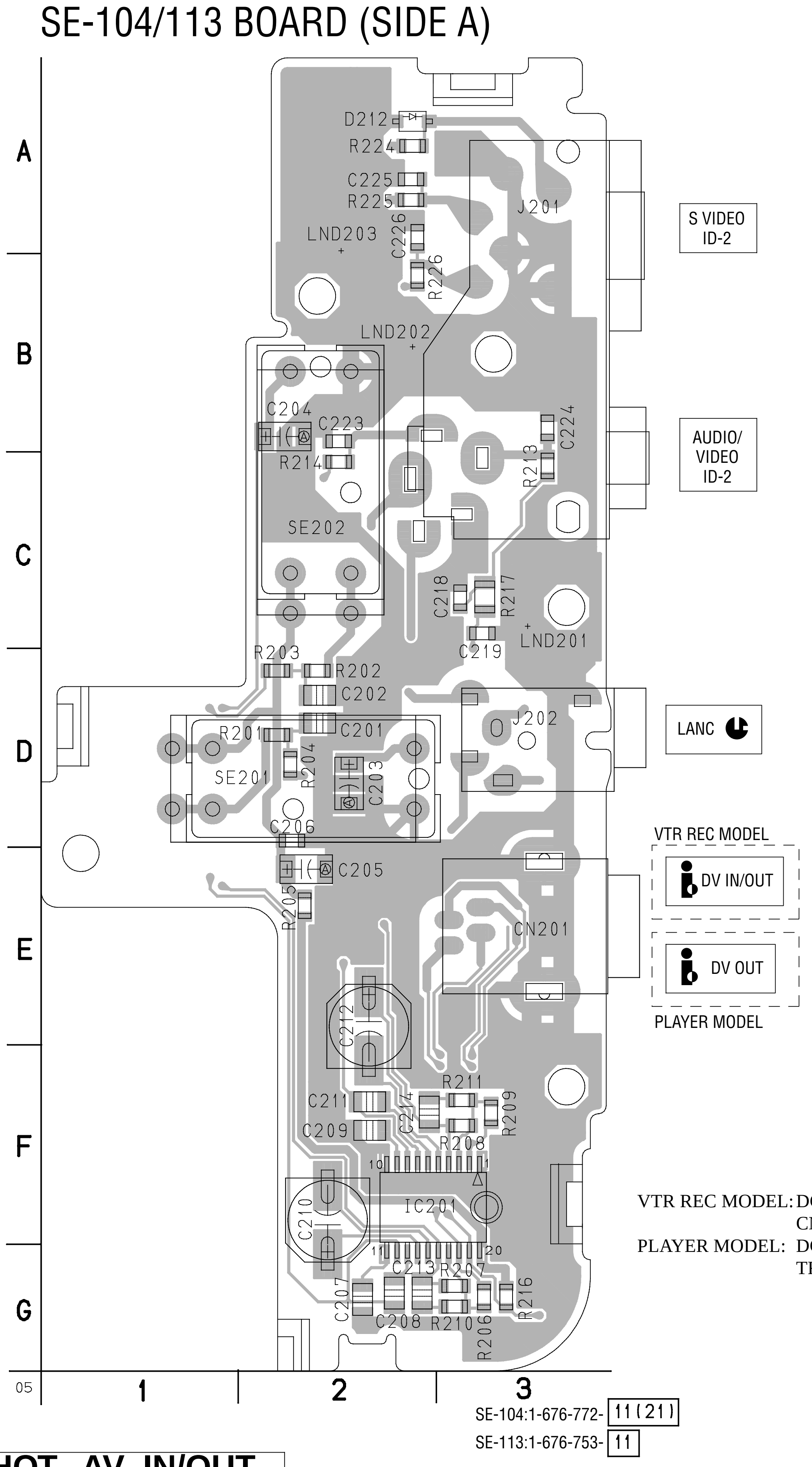
	REC	REC/PB	PB
Drum servo(speed and phase)		⮞	
Capstan servo(speed and phase)		⮞	

DC/DC CONVERTER
VC-235 (16/16)

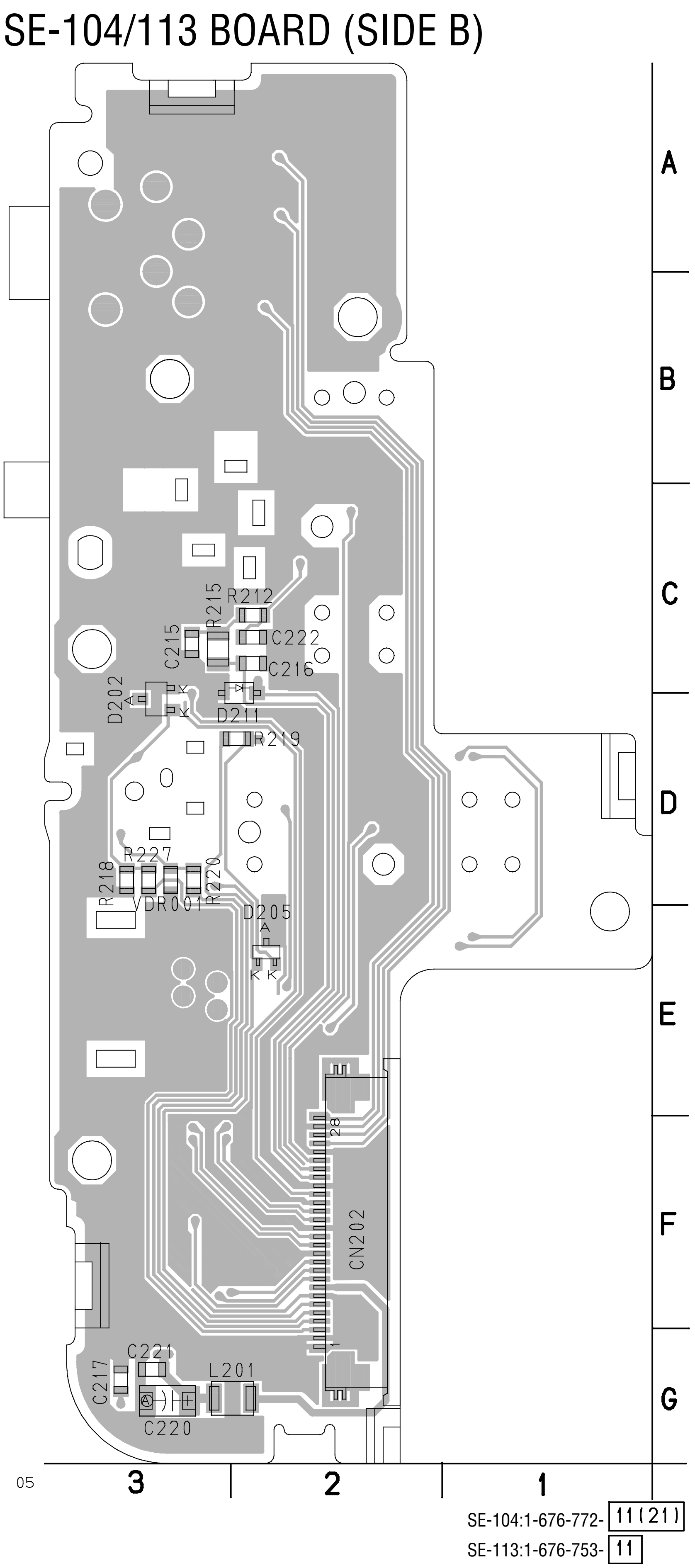
SE-104/113 (STEADY SHOT, AV IN/OUT) PRINTED WIRING BOARD

– Ref. No.: SE-104/113 board; 20,000 series –

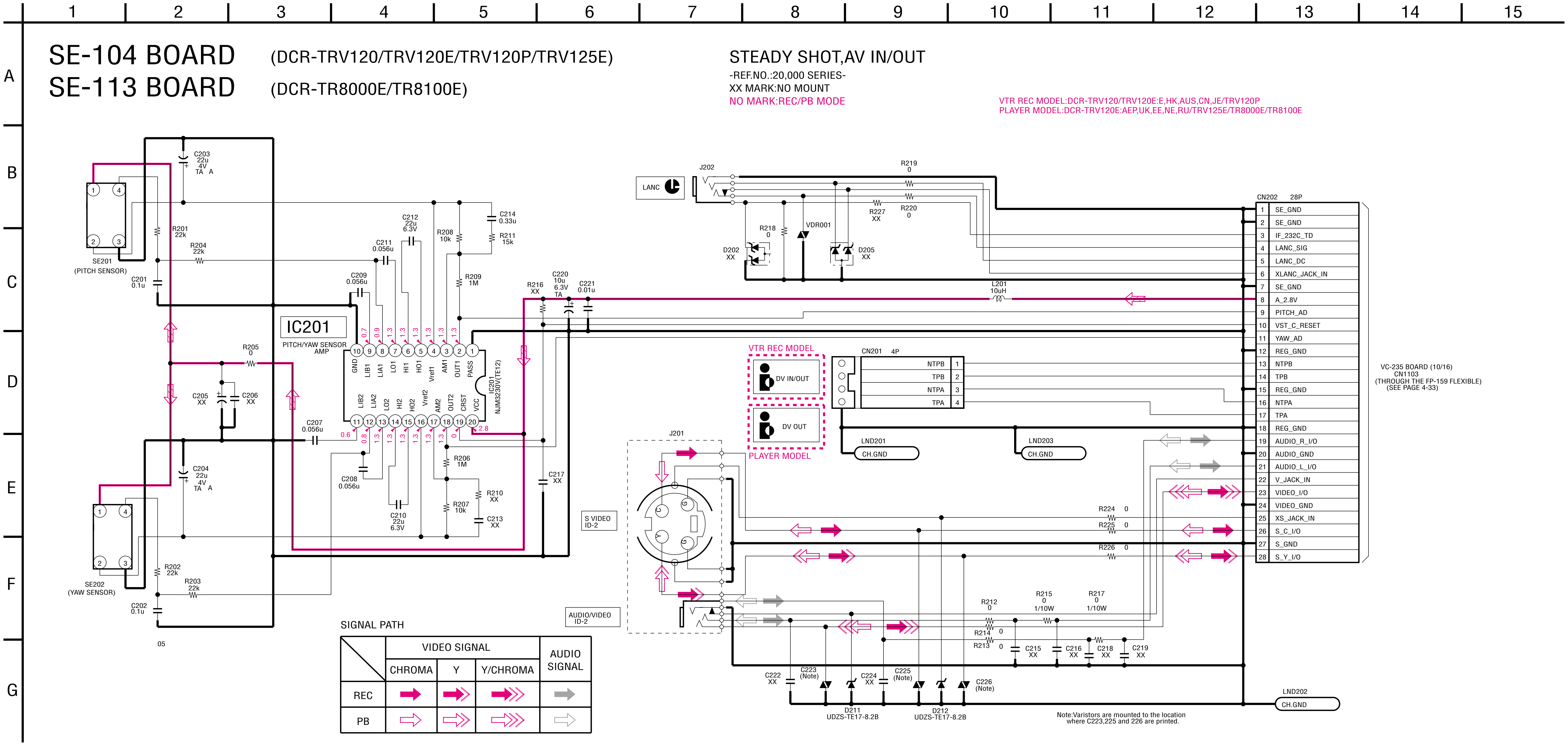
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-92 for printed parts location.


SE-104/113 BOARD (SIDE A)
A
B
C
D
E
F
G
1
2
3
05
D212
R224
C225
R225
C226
R226
LND203
J201
LND202
S VIDEO
ID-2
C204
C223
R214
R213
C224
AUDIO/
VIDEO
ID-2
SE202
C218
R217
LND201
C219
R203
R202
C202
R201
C201
J202
LANC
R204
C203
SE201
C206
C205
R205
VTR REC MODEL
DV IN/OUT
CN201
DV OUT
PLAYER MODEL
C212
R211
C211
C214
R209
C209
R208
10
1
IC201
C210
11
20
C207
C213
R207
R216
C208
R210
R206
SE-104:1-676-772- 11(21)
SE-113:1-676-753- 11

VTR REC MODEL: DCR-TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P
PLAYER MODEL: DCR-TRV120E: AEP, UK, EE, NE, RU/ TRV125E/TR8000E/TR8100E


SE-104/113 BOARD (SIDE B)
A
B
C
D
E
F
G
3
2
1
05
R215
R212
C215
C222
C216
D202
D211
R219
R227
R218
R220
VDR001
D205
28
CN202
1
C221
C217
L201
C220
SE-104:1-676-772- 11(21)
SE-113:1-676-753- 11

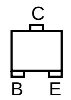
SE-104/113 (STEADY SHOT, AV IN/OUT) SCHEMATIC DIAGRAM

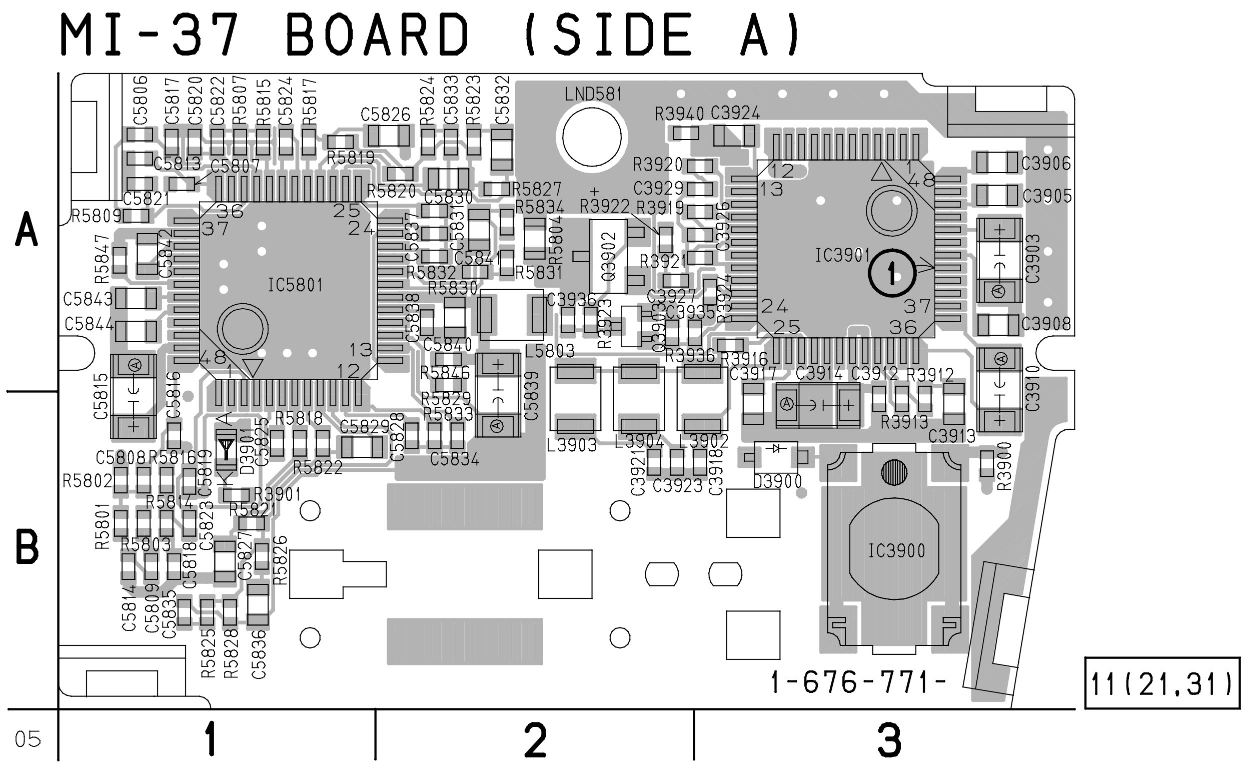

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
A
B
C
D
E
F
G
SE-104 BOARD (DCR-TRV120/TRV120E/TRV120P/TRV125E)
SE-113 BOARD (DCR-TR8000E/TR8100E)
STEADY SHOT,AV IN/OUT
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
VTR REC MODEL:DCR-TRV120/TRV120E:E,HK,AUS,CN,JE/TRV120P
PLAYER MODEL:DCR-TRV120E:AEP,UK,EE,NE,RU/TRV125E/TR8000E/TR8100E
SE201
(PITCH SENSOR)
SE202
(YAW SENSOR)
C203 22u 4V TA A
C204 22u 4V TA A
R201 22k
R204 22k
C201 0.1u
R202 22k
R203 22k
C202 0.1u
R205 0
C205 XX
C206 XX
C207 0.056u
C208 0.056u
C209 0.056u
C210 22u 6.3V
C211 0.056u
C212 22u 6.3V
C213 XX
C214 0.33u
R206 1M
R207 10k
R208 10k
R209 1M
R210 XX
R211 15k
R216 XX
C217 XX
C220 10u 6.3V TA
C221 0.01u
IC201
PITCH/YAW SENSOR AMP
IC201 NJM3230V(TE12)
GND LIB1 LIA1 LO1 HI1 HO1 Vref1 AM1 OUT1 PASS
LIB2 LIA2 LO2 HI2 HO2 Vref2 AM2 OUT2 CRST VCC
0.7 0.9 1.3 1.3 1.3 1.3 1.3 1.3 1.3
0.6 0.8 1.3 1.3 1.3 1.3 1.3 1.3 0 2.8
05
LANC
J202
R219 0
R227 XX
R220 0
R218 0
VDR001
D202 XX
D205 XX
L201 10uH
VTR REC MODEL
DV IN/OUT
DV OUT
PLAYER MODEL
CN201 4P
NTPB 1
TPB 2
NTPA 3
TPA 4
LND201 CH.GND
LND203 CH.GND
LND202 CH.GND
J201
S VIDEO ID-2
AUDIO/VIDEO ID-2
R224 0
R225 0
R226 0
R212 0
R213 0
R214 0
R215 0 1/10W
R217 0 1/10W
C215 XX
C216 XX
C218 XX
C219 XX
C222 XX
C223 (Note)
C224 XX
C225 (Note)
C226 (Note)
D211 UDZS-TE17-8.2B
D212 UDZS-TE17-8.2B
Note:Varistors are mounted to the location where C223,225 and 226 are printed.
CN202 28P
1 SE_GND
2 SE_GND
3 IF_232C_TD
4 LANC_SIG
5 LANC_DC
6 XLANC_JACK_IN
7 SE_GND
8 A_2.8V
9 PITCH_AD
10 VST_C_RESET
11 YAW_AD
12 REG_GND
13 NTPB
14 TPB
15 REG_GND
16 NTPA
17 TPA
18 REG_GND
19 AUDIO_R_I/O
20 AUDIO_GND
21 AUDIO_L_I/O
22 V_JACK_IN
23 VIDEO_I/O
24 VIDEO_GND
25 XS_JACK_IN
26 S_C_I/O
27 S_GND
28 S_Y_I/O
VC-235 BOARD (10/16) CN1103 (THROUGH THE FP-159 FLEXIBLE) (SEE PAGE 4-33)
SIGNAL PATH
VIDEO SIGNAL
CHROMA
Y
Y/CHROMA
AUDIO SIGNAL
REC
PB

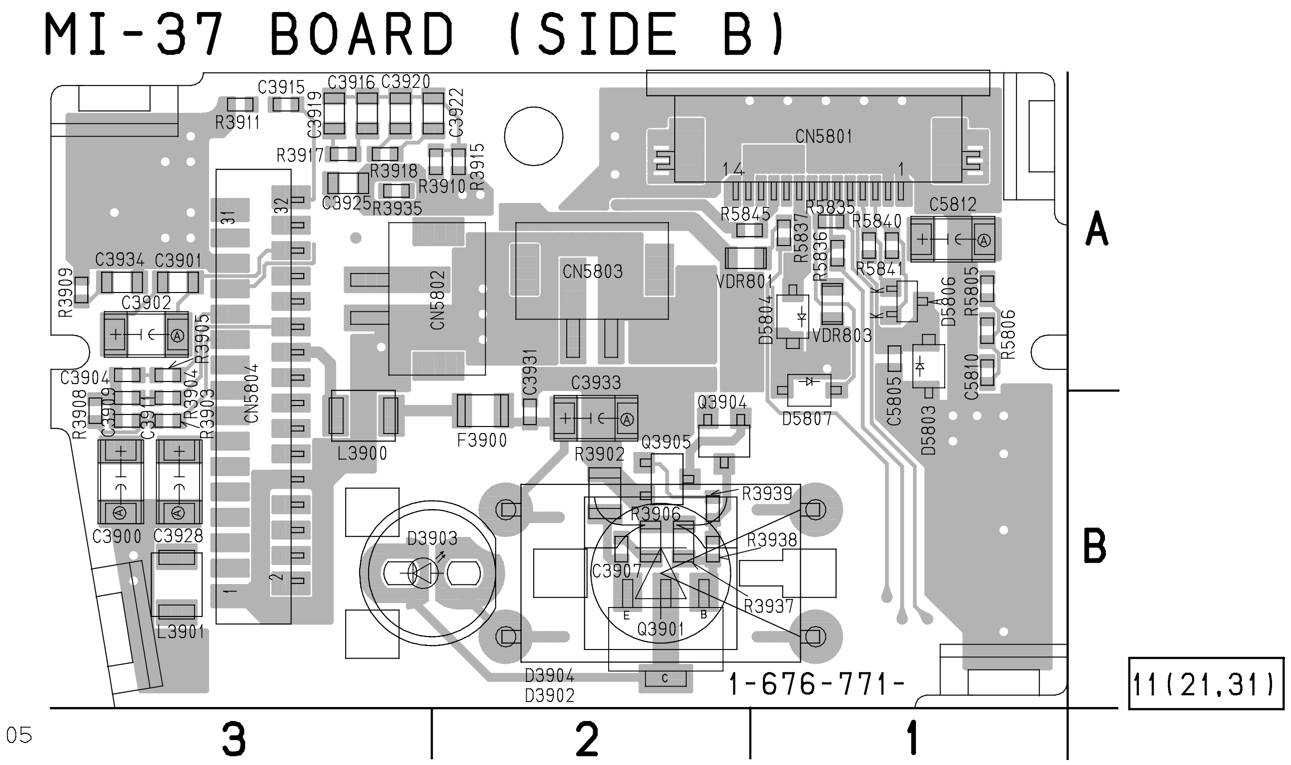
FP-156 (MIC/HP JACK, MF SENSOR), MI-37 (STEREO MIC AMP, IR TRANSMITTER) PRINTED WIRING BOARDS

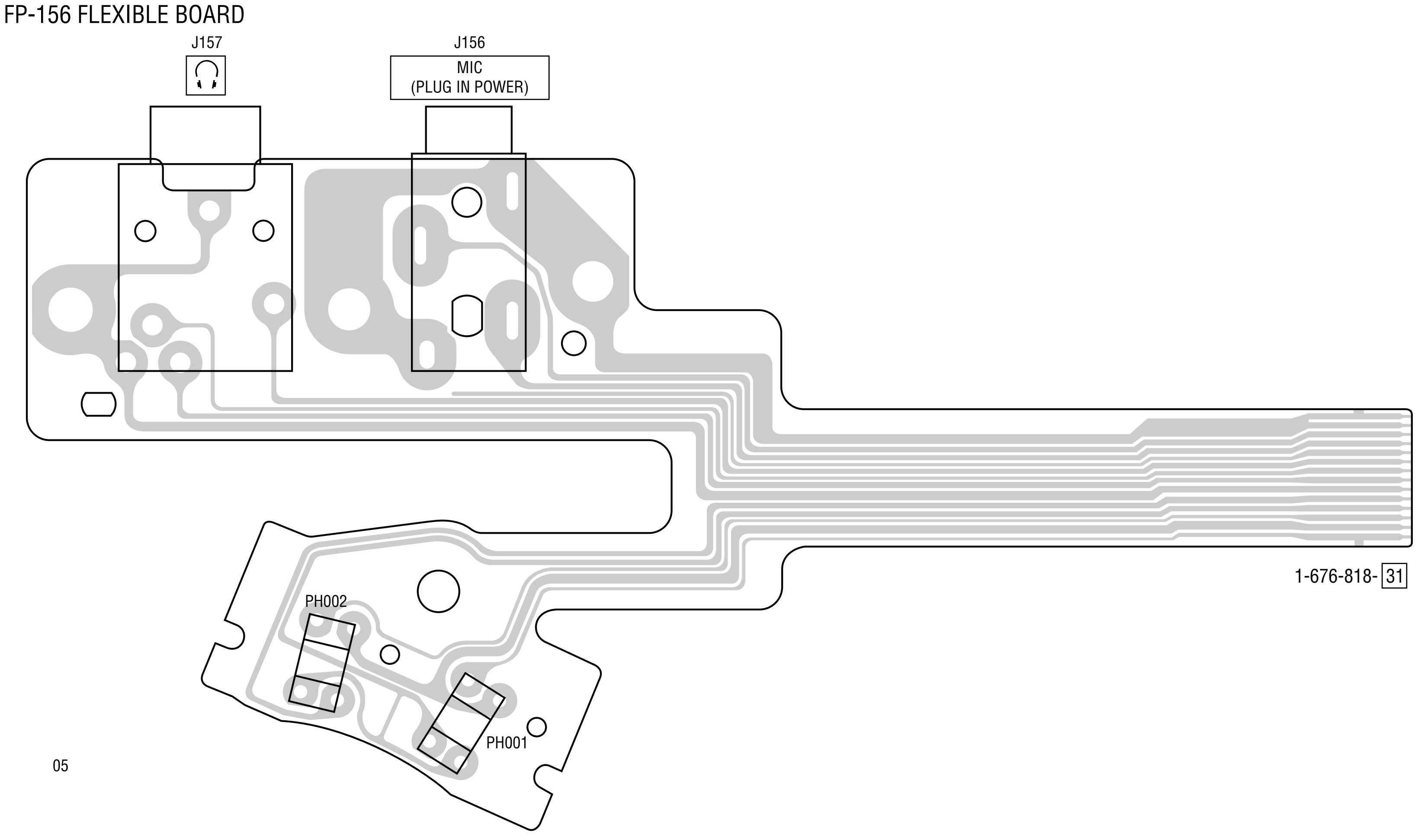
– Ref. No.: FP-156 flexible board; 10,000/MI-37 board; 10,000 series –

- **For Printed Wiring Board.**
- MI-37 board is eight-layer print board. However, the patterns of layers 2 to 7 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-92 for printed parts location.
- Chip transistor



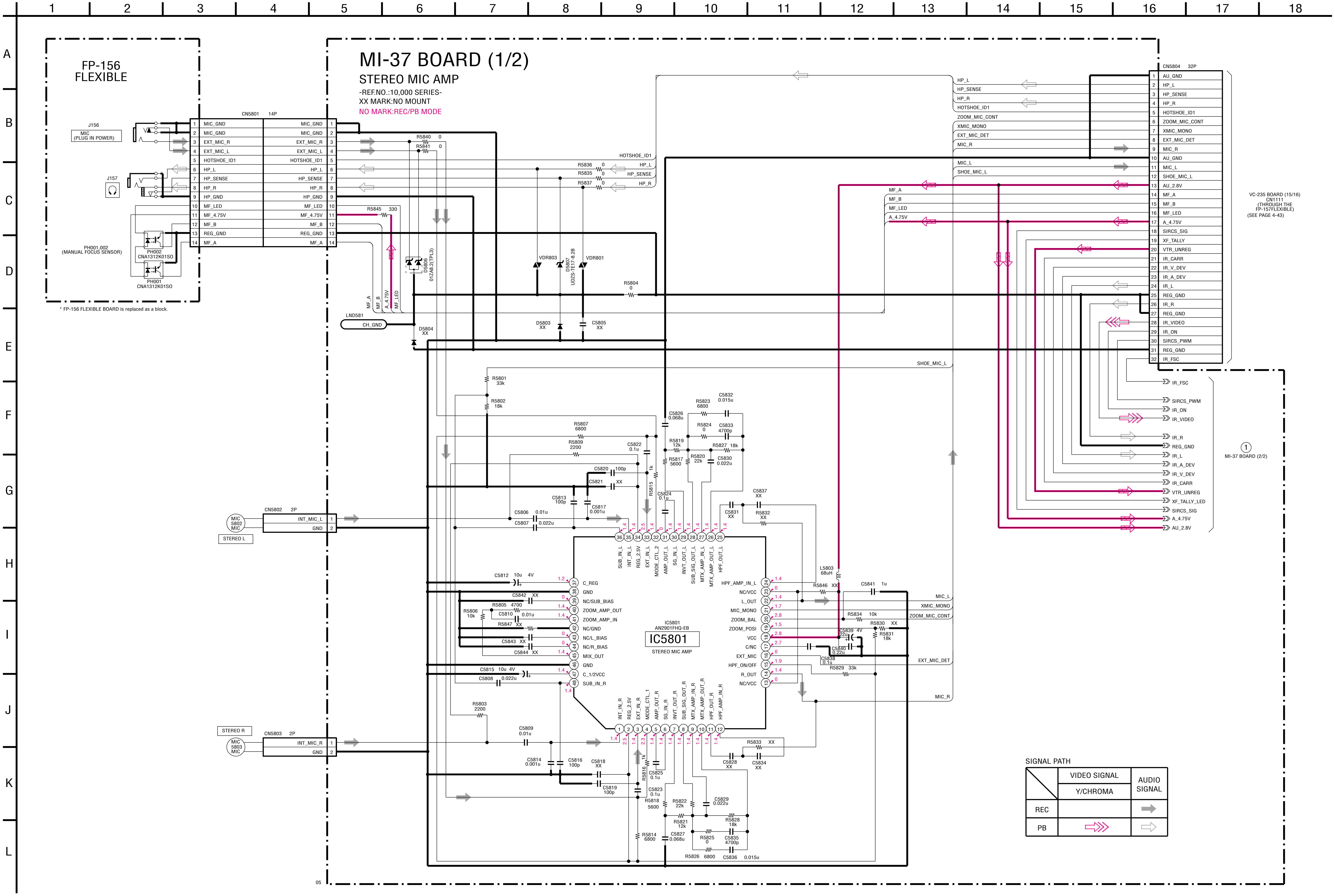

MI-37 BOARD (SIDE A)
A
B
IC5801
IC3901
IC3900
LND581
Q3902
L5803
L3903
L3904
L3902
D3900
D3901
C5806
C5817
C5820
C5822
R5807
R5815
C5824
R5817
C5826
R5824
C5833
R5823
C5832
R3940
C3924
R3920
C3929
R3922
R3919
R5827
R5834
R5804
R5831
R5819
R5820
C5830
C5813
C5807
C5821
R5809
R5847
C5842
C5843
C5844
C5815
C5816
C5808
R5816
R5802
R5801
R5803
C5814
C5809
C5835
R5825
R5828
C5836
R5818
R5822
C5829
C5828
C5834
R5846
R5829
R5833
C5839
C5840
C5838
R5832
R5830
C5841
C5837
C3936
R3923
C3927
C3935
R3936
R3916
R3921
C3917
C3914
C3912
R3912
R3913
C3913
R3900
C3906
C3905
C3903
C3908
C3910
C3921
C3923
C3918
R3901
R5821
R5826
1-676-771-
11(21,31)
05
1
2
3


MI-37 BOARD (SIDE B)
A
B
CN5801
CN5802
CN5803
CN5804
C3915
C3916
C3920
C3919
C3922
R3911
R3917
R3918
R3910
R3915
C3925
R3935
C3934
C3901
C3902
R3909
R3905
R3904
R3903
R3908
C3904
C3900
C3928
L3901
L3900
F3900
C3931
C3933
R3902
Q3904
Q3905
Q3901
D3903
D3904
D3902
C3907
R3906
R3939
R3938
R3937
R5845
R5835
R5840
C5812
R5837
R5836
R5841
VDR801
VDR803
D5804
D5806
R5805
R5806
D5807
C5805
C5810
D5803
14
1
31
32
1-676-771-
11(21,31)
05
3
2
1


FP-156 FLEXIBLE BOARD
J157
J156
MIC
(PLUG IN POWER)
PH002
PH001
1-676-818- 31
05

MIC/HP JACK, MF SENSOR/STEREO MIC AMP, IR TRANSMITTER
FP-156 / MI-37

FP-156 (MIC/HP JACK, MF SENSOR), MI-37 (STEREO MIC AMP) SCHEMATIC DIAGRAM • See page 4-51 for FP-156 and MI-37 printed wiring boards.


1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
I
J
K
L
FP-156
FLEXIBLE
J156
MIC
(PLUG IN POWER)
J157
PH001,002
(MANUAL FOCUS SENSOR)
PH002
CNA1312K01SO
PH001
CNA1312K01SO
* FP-156 FLEXIBLE BOARD is replaced as a block.
CN5801 14P
MIC_GND
MIC_GND
EXT_MIC_R
EXT_MIC_L
HOTSHOE_ID1
HP_L
HP_SENSE
HP_R
HP_GND
MF_LED
MF_4.75V
MF_B
REG_GND
MF_A
MI-37 BOARD (1/2)
STEREO MIC AMP
-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R5840 0
R5841 0
R5845 330
R5836 0
R5835 0
R5837 0
HOTSHOE_ID1
HP_L
HP_SENSE
HP_R
D5806
01ZA8.2(TPL3)
VDR803
D5807
UDZS-TE17-8.2B
VDR801
R5804 0
D5803 XX
D5805 XX
D5804 XX
LND581
CH_GND
MF_A
MF_B
A_4.75V
MF_LED
CN5804 32P
AU_GND
HP_L
HP_SENSE
HP_R
HOTSHOE_ID1
ZOOM_MIC_CONT
XMIC_MONO
EXT_MIC_DET
MIC_R
AU_GND
MIC_L
SHOE_MIC_L
AU_2.8V
MF_A
MF_B
MF_LED
A_4.75V
SIRCS_SIG
XF_TALLY
VTR_UNREG
IR_CARR
IR_V_DEV
IR_A_DEV
IR_L
REG_GND
IR_R
REG_GND
IR_VIDEO
IR_ON
SIRCS_PWM
REG_GND
IR_FSC
VC-235 BOARD (15/16)
CN1111
(THROUGH THE
FP-157FLEXIBLE)
(SEE PAGE 4-43)
SHOE_MIC_L
IR_FSC
SIRCS_PWM
IR_ON
IR_VIDEO
IR_R
REG_GND
IR_L
IR_A_DEV
IR_V_DEV
IR_CARR
VTR_UNREG
XF_TALLY_LED
SIRCS_SIG
A_4.75V
AU_2.8V
① MI-37 BOARD (2/2)
R5801 33k
R5802 18k
R5807 6800
R5809 2200
C5822 0.1u
C5820 100p
C5821 XX
C5813 100p
C5817 0.001u
C5806 0.01u
C5807 0.022u
R5815 1k
C5826 0.068u
R5823 6800
C5832 0.015u
R5824 0
C5833 4700p
R5819 12k
R5827 18k
R5817 5600
R5820 22k
C5830 0.022u
C5824 0.1u
C5831 XX
C5837 XX
R5832 XX
CN5802 2P
MIC 5802 MIC
STEREO L
INT_MIC_L
GND
SUB_IN_L
INT_IN_L
REG_2.5V
EXT_IN_L
MODE_CTL_2
AMP_OUT_L
SG_IN_L
INVT_OUT_L
SUB_SIG_OUT_L
MTX_AMP_IN_L
MTX_AMP_OUT_L
HPF_OUT_L
C5812 10u 4V
C5842 XX
R5805 4700
R5806 10k
C5810 0.01u
R5847 XX
C5843 XX
C5844 XX
C5815 10u 4V
C5808 0.022u
C_REG
GND
NC/SUB_BIAS
ZOOM_AMP_OUT
ZOOM_AMP_IN
NC/GND
NC/L_BIAS
NC/R_BIAS
MIX_OUT
GND
C_1/2VCC
SUB_IN_R
IC5801
AN2901FHQ-EB
IC5801
STEREO MIC AMP
HPF_AMP_IN_L
NC/VCC
L_OUT
MIC_MONO
ZOOM_BAL
ZOOM_POSI
VCC
C/NC
EXT_MIC
HPF_ON/OFF
R_OUT
NC/VCC
L5803 68uH
R5846 XX
C5841 1u
R5834 10k
R5830 XX
C5839 4V 22u
R5831 18k
C5840 0.22u
C5838 0.1u
R5829 33k
MIC_L
XMIC_MONO
ZOOM_MIC_CONT
EXT_MIC_DET
MIC_R
R5803 2200
C5809 0.01u
CN5803 2P
MIC 5803 MIC
STEREO R
INT_MIC_R
GND
INT_IN_R
REG_2.5V
EXT_IN_R
MODE_CTL_1
AMP_OUT_R
SG_IN_R
INVT_OUT_R
SUB_SIG_OUT_R
MTX_AMP_IN_R
MTX_AMP_OUT_R
HPF_OUT_R
HPF_AMP_IN_R
C5814 0.001u
C5816 100p
C5818 XX
C5819 100p
R5816 1k
C5825 0.1u
C5823 0.1u
R5818 5600
R5822 22k
C5829 0.022u
R5821 12k
R5828 18k
R5814 6800
C5827 0.068u
R5825 0
C5835 4700p
R5826 6800
C5836 0.015u
R5833 XX
C5828 XX
C5834 XX
05
SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
AUDIO SIGNAL
REC
PB

MIC/HP JACK, MF SENSOR/STEREO MIC AMP
FP-156 / MI-37 (1/2)

MI-37 (IR TRANSMITTER) SCHEMATIC DIAGRAM • See page 4-51 for MI-37 printed wiring board. • See page 4-89 for waveform.

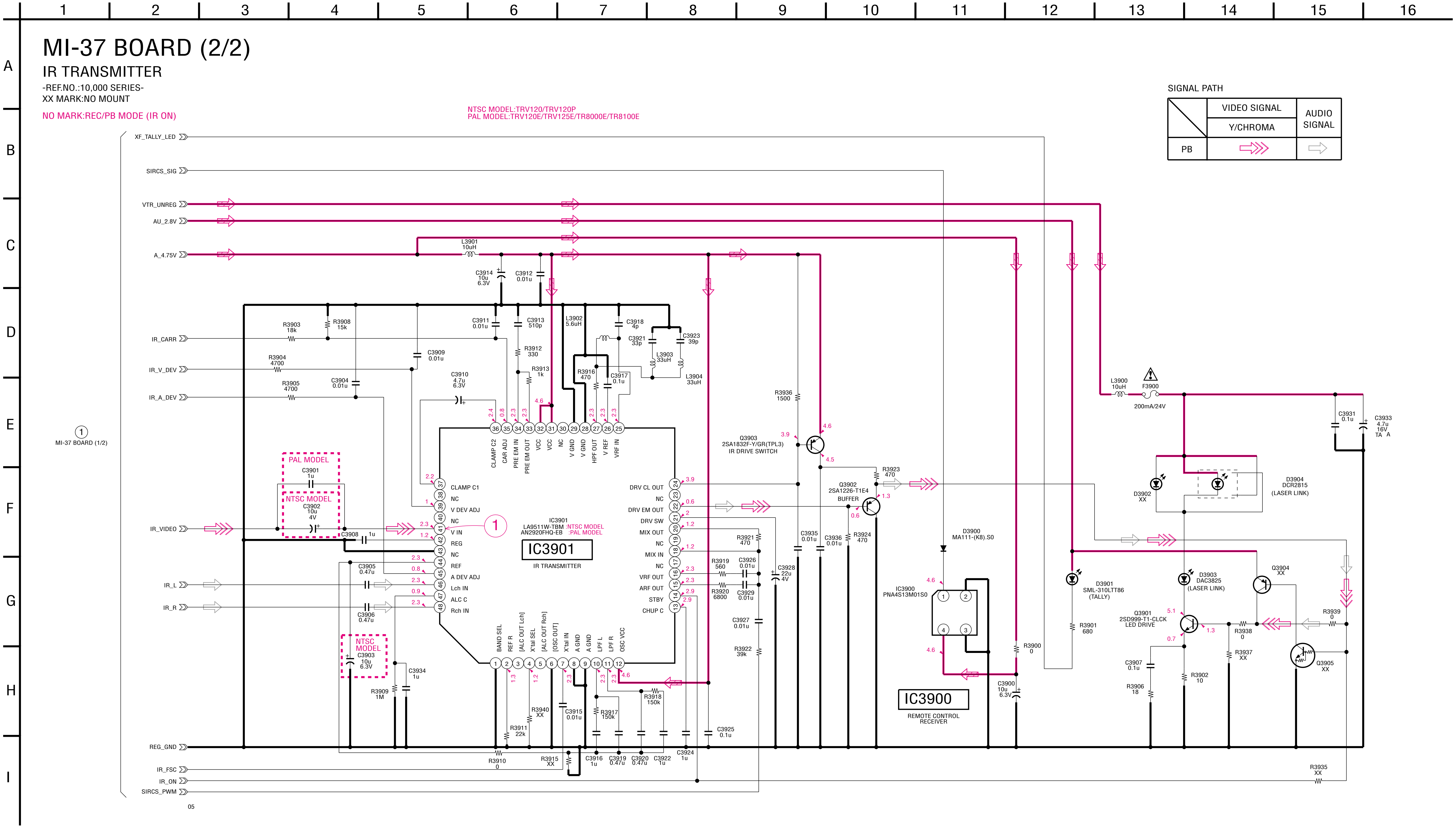
MI-37 BOARD (2/2)

IR TRANSMITTER

-REF.NO.:10,000 SERIES-
XX MARK:NO MOUNT

NO MARK:REC/PB MODE (IR ON)

NTSC MODEL:TRV120/TRV120P
PAL MODEL:TRV120E/TRV125E/TR8000E/TR8100E


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I
SIGNAL PATH
VIDEO SIGNAL
Y/CHROMA
AUDIO SIGNAL
PB
XF_TALLY_LED
SIRCS_SIG
VTR_UNREG
AU_2.8V
A_4.75V
IR_CARR
IR_V_DEV
IR_A_DEV
IR_VIDEO
IR_L
IR_R
REG_GND
IR_FSC
IR_ON
SIRCS_PWM
1 MI-37 BOARD (1/2)
L3901 10uH
C3914 10u 6.3V
C3912 0.01u
R3903 18k
R3908 15k
R3904 4700
R3905 4700
C3904 0.01u
C3909 0.01u
C3910 4.7u 6.3V
C3911 0.01u
C3913 510p
R3912 330
R3913 1k
L3902 5.6uH
R3916 470
C3917 0.1u
C3918 4p
C3921 33p
C3923 39p
L3903 33uH
L3904 33uH
PAL MODEL
C3901 1u
NTSC MODEL
C3902 10u 4V
C3908 1u
C3905 0.47u
C3906 0.47u
NTSC MODEL
C3903 10u 6.3V
C3934 1u
R3909 1M
IC3901
LA9511W-TBM :NTSC MODEL
AN2920FHQ-EB :PAL MODEL
IC3901
IR TRANSMITTER
CLAMP C2
CAR ADJ
PRE EM IN
PRE EM OUT
VCC
VCC
NC
V GND
V GND
HPF OUT
V REF
VRF IN
CLAMP C1
NC
V DEV ADJ
NC
V IN
REG
NC
REF
A DEV ADJ
Lch IN
ALC C
Rch IN
DRV CL OUT
NC
DRV EM OUT
DRV SW
MIX OUT
NC
MIX IN
NC
VRF OUT
ARF OUT
STBY
CHUP C
BAND SEL
REF R
[ALC OUT Lch]
X'tal SEL
[ALC OUT Rch]
[OSC OUT]
X'tal IN
A GND
A GND
LPF L
LPF R
OSC VCC
R3940 XX
R3911 22k
C3915 0.01u
R3917 150k
R3918 150k
R3910 0
R3915 XX
C3916 1u
C3919 0.47u
C3920 0.47u
C3922 1u
C3924 1u
C3925 0.1u
R3936 1500
Q3903 2SA1832F-Y/GR(TPL3) IR DRIVE SWITCH
Q3902 2SA1226-T1E4 BUFFER
R3923 470
R3924 470
R3921 470
C3935 0.01u
C3936 0.01u
R3919 560
C3926 0.01u
R3920 6800
C3929 0.01u
C3928 22u 4V
C3927 0.01u
R3922 39k
D3900 MA111-(K8).S0
IC3900 PNA4S13M01S0
IC3900 REMOTE CONTROL RECEIVER
R3900 0
C3900 10u 6.3V
L3900 10uH
F3900 200mA/24V
C3931 0.1u
C3933 4.7u 16V TA A
D3902 XX
D3904 DCR2815 (LASER LINK)
D3901 SML-310LTT86 (TALLY)
R3901 680
D3903 DAC3825 (LASER LINK)
Q3901 2SD999-T1-CLCK LED DRIVE
Q3904 XX
R3938 0
R3939 0
R3937 XX
Q3905 XX
C3907 0.1u
R3906 18
R3902 10
R3935 XX
05

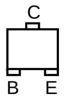
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

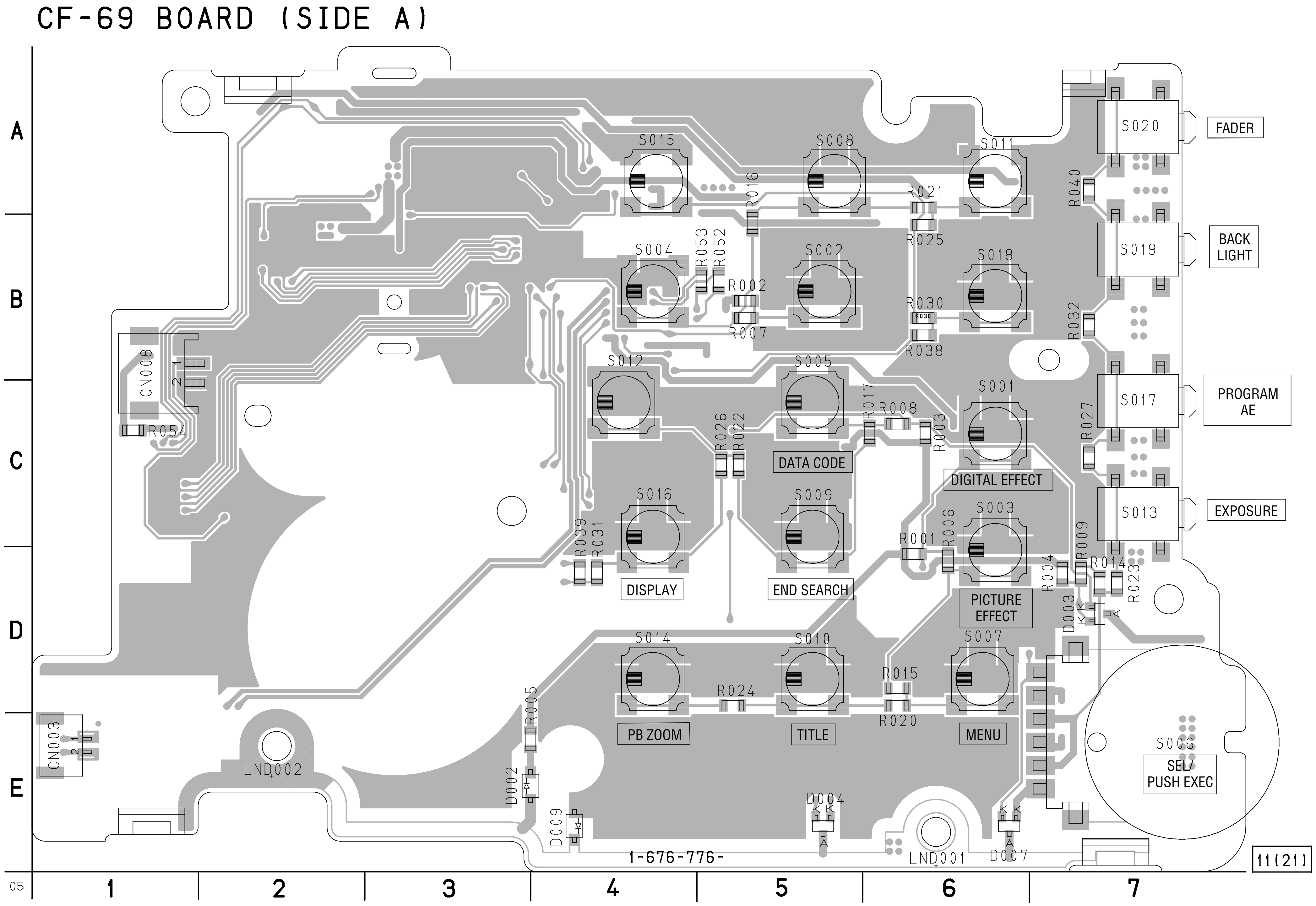
CF-69 (USER CONTROL) PRINTED WIRING BOARD

– Ref. No.: CF-69 board; 20,000 series –

– DCR-TRV120/TRV120E/TRV120P/TRV125E –

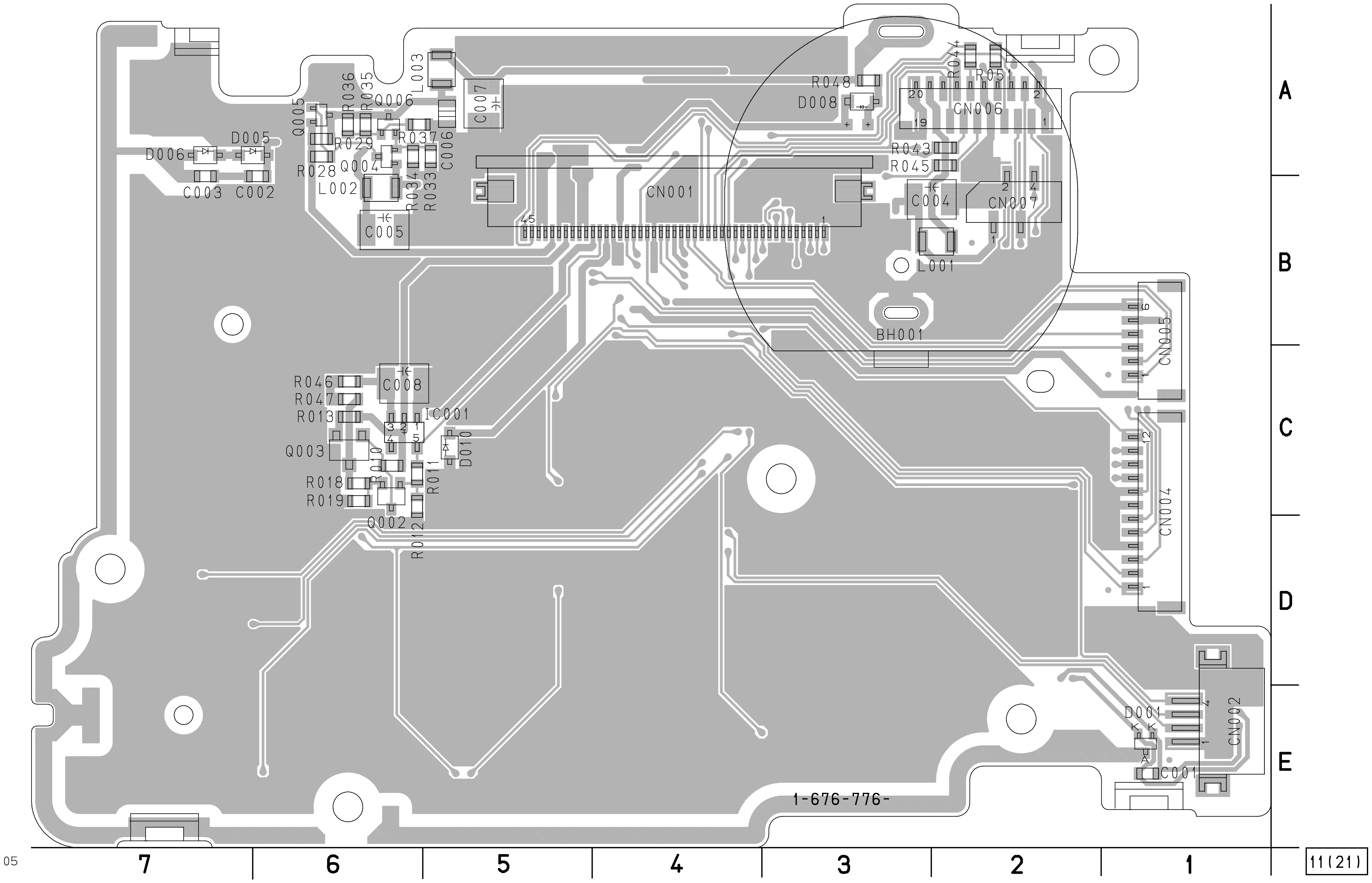
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-93 for printed parts location.
- Chip transistor



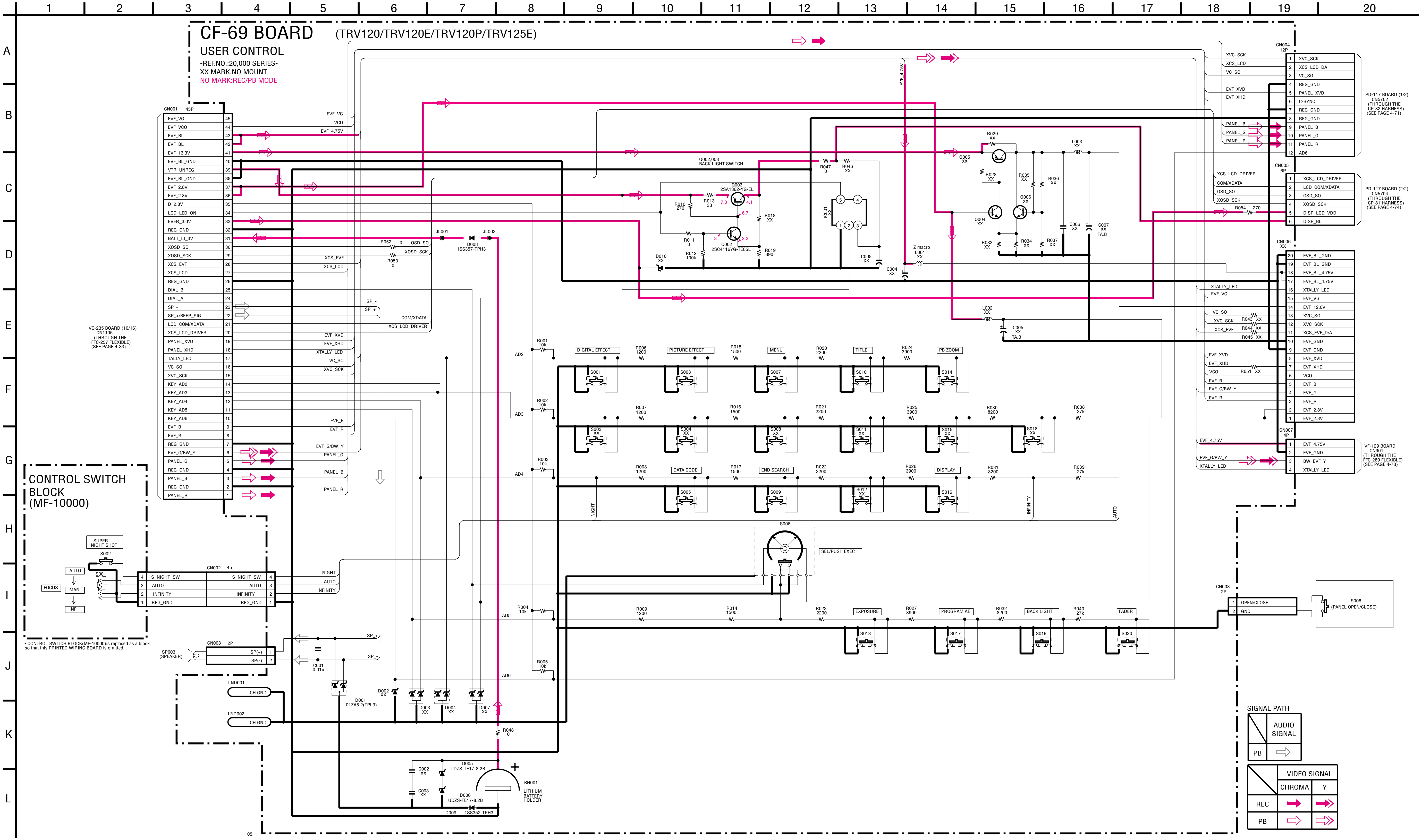

CF-69 BOARD (SIDE A)
A
B
C
D
E
1
2
3
4
5
6
7
05
S015
S008
S011
S020
FADER
R016
R021
R025
R040
S004
R053
R052
S002
S018
S019
BACK LIGHT
R002
R007
R030
R038
R032
CN008
2
1
R054
S012
S005
S001
S017
PROGRAM AE
R017
R008
R003
R027
R026
R022
DATA CODE
DIGITAL EFFECT
S016
S009
S003
S013
EXPOSURE
R039
R031
R001
R006
R009
R004
R014
R023
DISPLAY
END SEARCH
PICTURE EFFECT
D003
S014
S010
S007
R015
R024
R020
CN003
2
1
LND002
R005
PB ZOOM
TITLE
MENU
S006
SEL/ PUSH EXEC
D002
D009
D004
LND001
D007
1-676-776-
11(21)

USER CONTROL
CF-69

CF-69 BOARD (SIDE B)


A
B
C
D
E
7
6
5
4
3
2
1
05
11(21)
L003
C007
R048
D008
R044
R051
CN006
20
2
19
1
Q005
R036
R035
Q006
R029
R037
C006
D005
D006
C003
C002
R028
Q004
L002
R034
R033
C005
CN001
45
1
R043
R045
C004
CN007
2
4
1
L001
BH001
CN005
6
1
R046
R047
R013
C008
IC001
3
2
1
4
5
D010
Q003
R010
R011
R018
R019
Q002
R012
CN004
12
1
D001
K
K
A
C001
CN002
4
1
1-676-776-

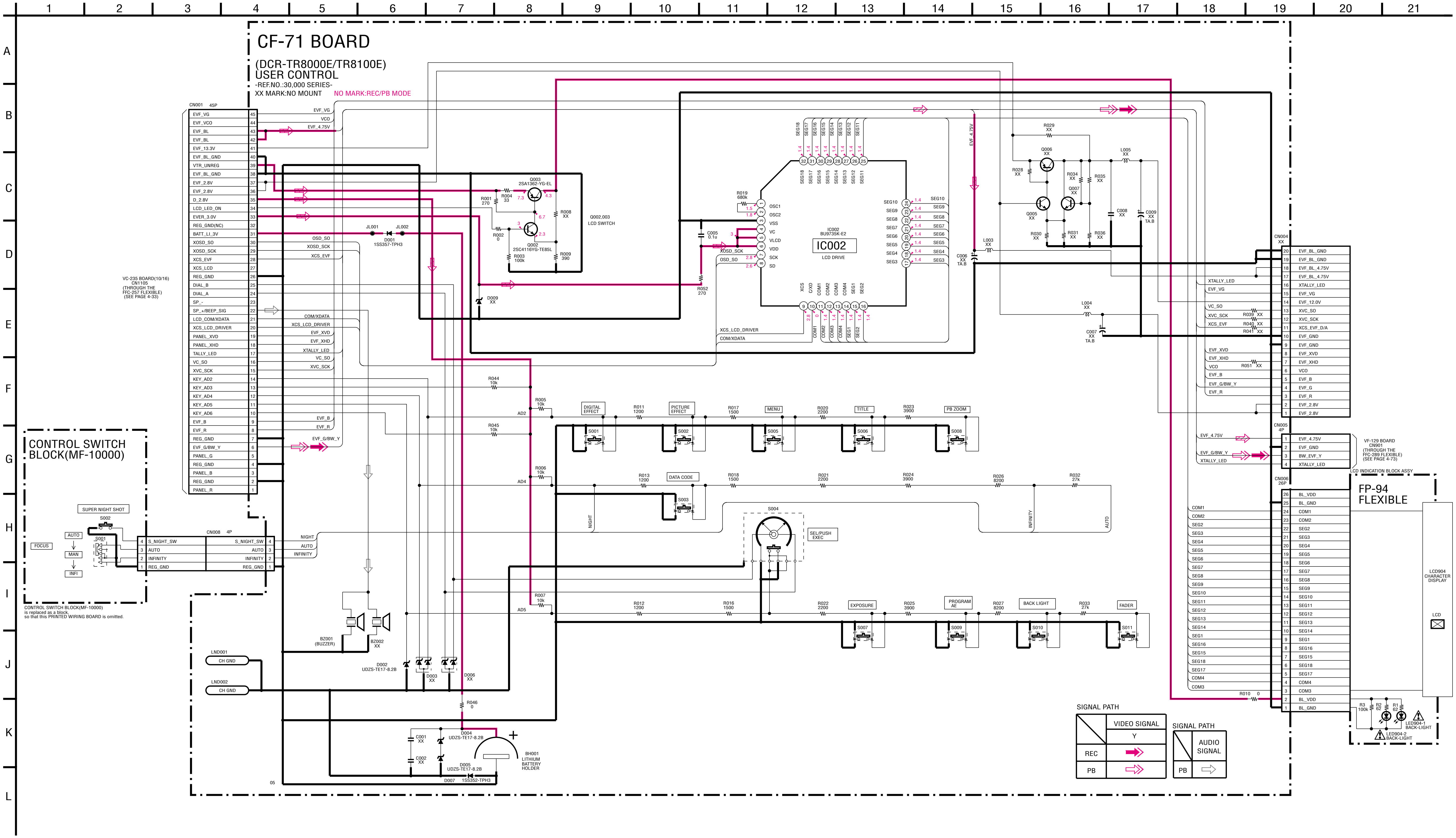
MF-10000 (CONTROL SWITCH BLOCK), CF-69 (USER CONTROL) SCHEMATIC DIAGRAM • See page 4-59 for CF-69 printed wiring boards.


CF-69 BOARD
(TRV120/TRV120E/TRV120P/TRV125E)
USER CONTROL
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
CONTROL SWITCH BLOCK
(MF-10000)
CN001 45P
45 EVF_VG
44 EVF_VCO
43 EVF_BL
42 EVF_BL
41 EVF_13.3V
40 EVF_BL_GND
39 VTR_UNREG
38 EVF_BL_GND
37 EVF_2.8V
36 EVF_2.8V
35 D_2.8V
34 LCD_LED_ON
33 EVER_3.0V
32 REG_GND
31 BATT_LI_3V
30 XOSD_SO
29 XOSD_SCK
28 XCS_EVF
27 XCS_LCD
26 REG_GND
25 DIAL_B
24 DIAL_A
23 SP_-
22 SP_+/BEEP_SIG
21 LCD_COM/XDATA
20 XCS_LCD_DRIVER
19 PANEL_XVD
18 PANEL_XHD
17 TALLY_LED
16 VC_SO
15 XVC_SCK
14 KEY_AD2
13 KEY_AD3
12 KEY_AD4
11 KEY_AD5
10 KEY_AD6
9 EVF_B
8 EVF_R
7 REG_GND
6 EVF_G/BW_Y
5 PANEL_G
4 REG_GND
3 PANEL_B
2 REG_GND
1 PANEL_R
VC-235 BOARD (10/16) CN1105 (THROUGH THE FFC-257 FLEXIBLE) (SEE PAGE 4-33)
CN004 12P
1 XVC_SCK
2 XCS_LCD_DA
3 VC_SO
4 REG_GND
5 PANEL_XVD
6 C-SYNC
7 REG_GND
8 REG_GND
9 PANEL_B
10 PANEL_G
11 PANEL_R
12 AD6
PD-117 BOARD (1/2) CN5702 (THROUGH THE CP-82 HARNESS) (SEE PAGE 4-71)
CN005 6P
1 XCS_LCD_DRIVER
2 LCD_COM/XDATA
3 OSD_SO
4 XOSD_SCK
5 DISP_LCD_VDD
6 DISP_BL
PD-117 BOARD (2/2) CN5704 (THROUGH THE CP-81 HARNESS) (SEE PAGE 4-74)
CN006 XX
20 EVF_BL_GND
19 EVF_BL_GND
18 EVF_BL_4.75V
17 EVF_BL_4.75V
16 XTALLY_LED
15 EVF_VG
14 EVF_12.0V
13 XVC_SO
12 XVC_SCK
11 XCS_EVF_D/A
10 EVF_GND
9 EVF_GND
8 EVF_XVD
7 EVF_XHD
6 VCO
5 EVF_B
4 EVF_G
3 EVF_R
2 EVF_2.8V
1 EVF_2.8V
CN007 4P
1 EVF_4.75V
2 EVF_GND
3 BW_EVF_Y
4 XTALLY_LED
VF-129 BOARD CN901 (THROUGH THE FFC-289 FLEXIBLE) (SEE PAGE 4-73)
CN008 2P
1 OPEN/CLOSE
2 GND
S008 (PANEL OPEN/CLOSE)
Q002,003 BACK LIGHT SWITCH
Q003 2SA1362-YG-EL
Q002 2SC4116YG-TE85L
D008 1SS357-TPH3
JL001
JL002
DIGITAL EFFECT
PICTURE EFFECT
MENU
TITLE
PB ZOOM
DATA CODE
END SEARCH
DISPLAY
EXPOSURE
PROGRAM AE
BACK LIGHT
FADER
S006
SEL/PUSH EXEC
NIGHT
INFINITY
AUTO
AD2
AD3
AD4
AD5
AD6
SUPER NIGHT SHOT
S002
S001
AUTO
MAN
INFI
FOCUS
CN002 4p
4 S_NIGHT_SW
3 AUTO
2 INFINITY
1 REG_GND
CN003 2P
SP003 (SPEAKER)
1 SP(+)
2 SP(-)
C001 0.01u
D001 01ZA8.2(TPL3)
LND001 CH GND
LND002 CH GND
D005 UDZS-TE17-8.2B
D006 UDZS-TE17-8.2B
D009 1SS352-TPH3
BH001 LITHIUM BATTERY HOLDER
R048 0
SIGNAL PATH
AUDIO SIGNAL
PB
VIDEO SIGNAL
CHROMA
Y
REC
PB

• CONTROL SWITCH BLOCK(MF-10000)is replaced as a block, so that this PRINTED WIRING BOARD is omitted.

CONTROL SWITCH BLOCK/USER CONTROL
MF-10000 CF-69

MF-10000 (CONTROL SWITCH BLOCK), CF-71 (USER CONTROL) SCHEMATIC DIAGRAM • See page 4-67 for CF-71 printed wiring board.


CF-71 BOARD
(DCR-TR8000E/TR8100E)
USER CONTROL
-REF.NO.:30,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
CONTROL SWITCH BLOCK(MF-10000)
CONTROL SWITCH BLOCK(MF-10000) is replaced as a block, so that this PRINTED WIRING BOARD is omitted.
CN001 45P
CN008 4P
CN004 XX
CN005 4P
CN006 26P
IC002 BU9735K-E2 LCD DRIVE
Q003 2SA1362-YG-EL
Q002 2SC4116YG-TE85L
Q002,003 LCD SWITCH
D001 1SS357-TPH3
D002 UDZS-TE17-8.2B
D004 UDZS-TE17-8.2B
D005 UDZS-TE17-8.2B
D007 1SS352-TPH3
BZ001 (BUZZER)
BZ002 XX
BH001 LITHIUM BATTERY HOLDER
VC-235 BOARD(10/16) CN1105 (THROUGH THE FFC-257 FLEXIBLE) (SEE PAGE 4-33)
VF-129 BOARD CN901 (THROUGH THE FFC-289 FLEXIBLE) (SEE PAGE 4-73)
FP-94 FLEXIBLE
LCD INDICATION BLOCK ASSY
LCD904 CHARACTER DISPLAY
LED904-1 BACK-LIGHT
LED904-2 BACK-LIGHT
SUPER NIGHT SHOT
FOCUS
AUTO
MAN
INFI
DIGITAL EFFECT
PICTURE EFFECT
MENU
TITLE
PB ZOOM
DATA CODE
SEL/PUSH EXEC
EXPOSURE
PROGRAM AE
BACK LIGHT
FADER
NIGHT
INFINITY
AUTO
LND001 CH GND
LND002 CH GND
SIGNAL PATH
VIDEO SIGNAL
Y
REC
PB
AUDIO SIGNAL

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

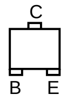
CF-71 (USER CONTROL) PRINTED WIRING BOARD

– Ref. No.: CF-71 board; 30,000 series –

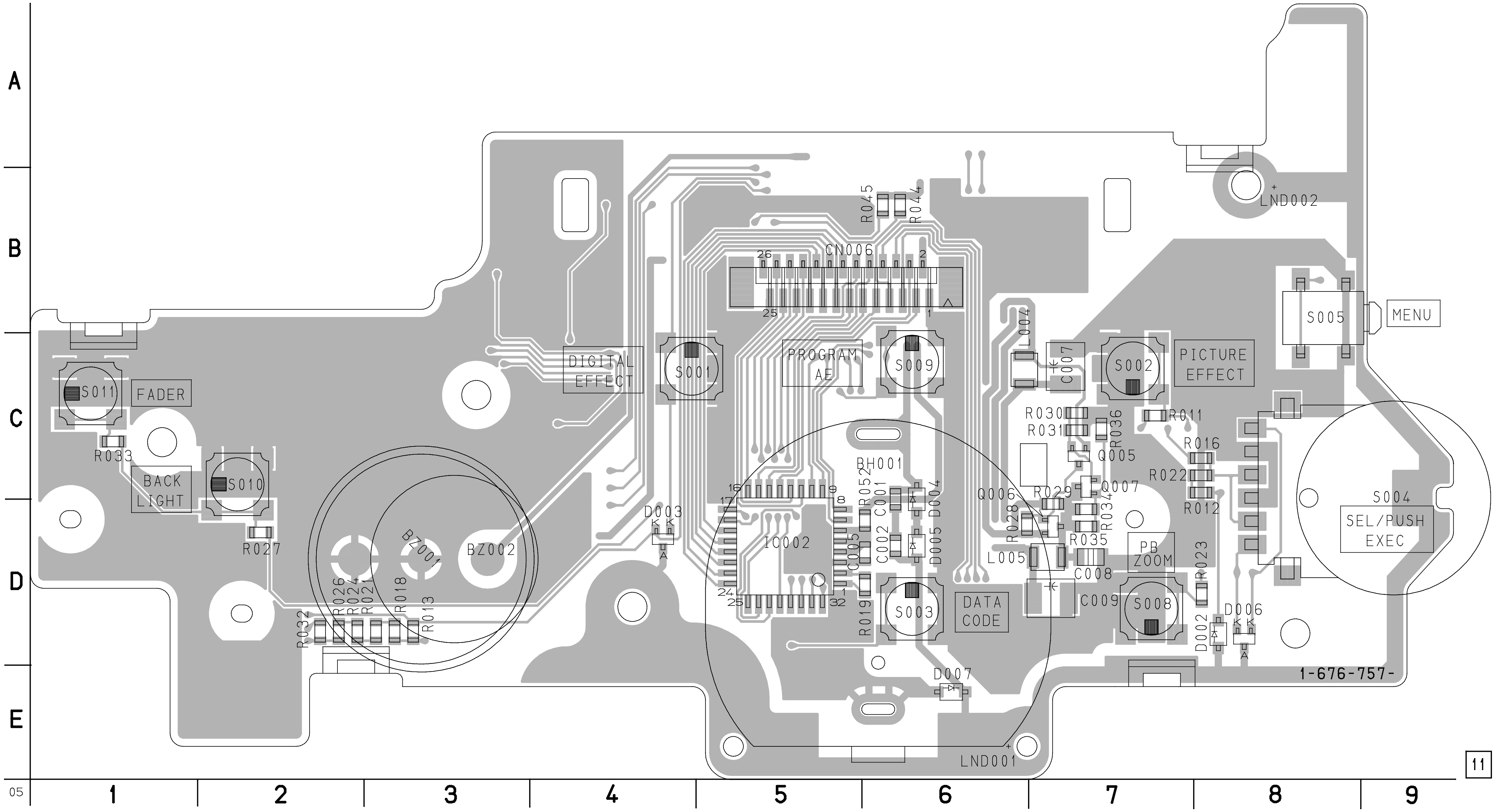
– DCR-TR8000E/TR8100E –

• For Printed Wiring Board.

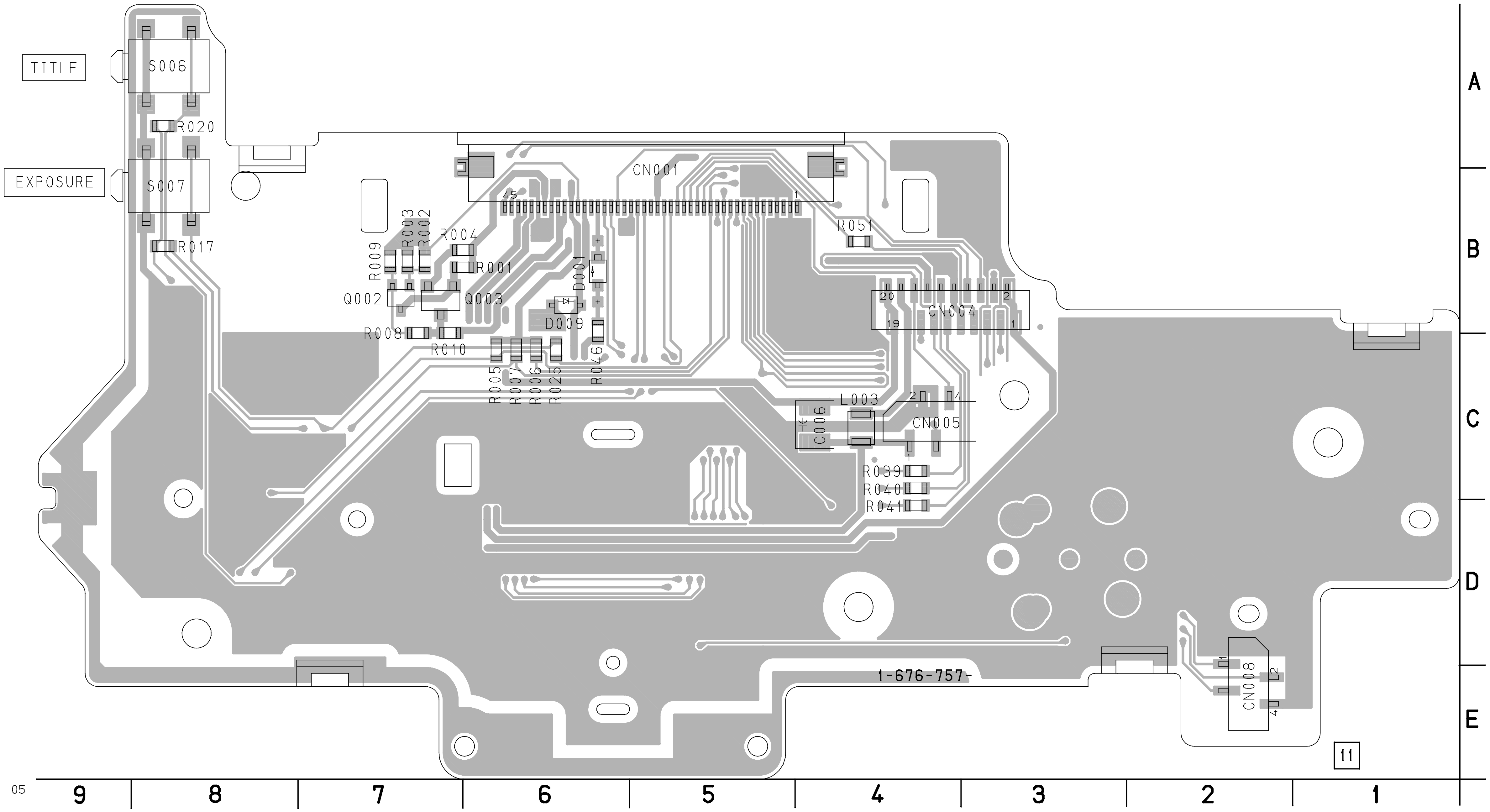
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-93 for printed parts location.
- Chip transistor



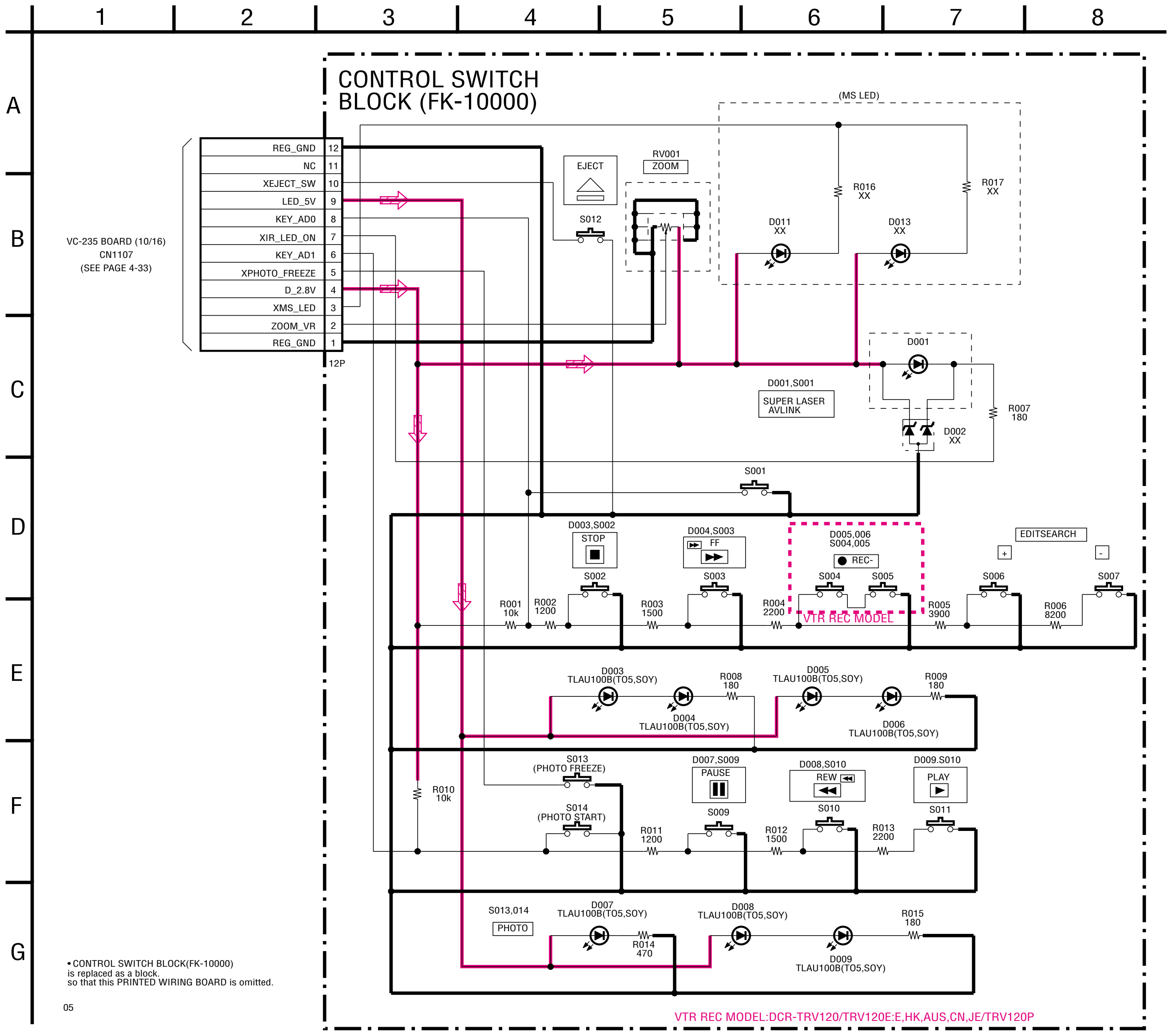
CF-71 BOARD (SIDE A)


A
B
C
D
E
05
1
2
3
4
5
6
7
8
9
11
S011
FADER
R033
BACK
LIGHT
S010
R027
R032
R026
R024
R021
R018
R013
BZ001
BZ002
DIGITAL
EFFECT
S001
D003
K K
A
R045
R044
CN006
26
2
25
1
PROGRAM
AE
S009
BH001
16
17
9
8
24
25
32
IC002
R052
C001
C002
C005
D004
D005
R019
S003
DATA
CODE
D007
LND001
L004
C007
S002
PICTURE
EFFECT
R030
R031
R036
Q005
R029
Q006
Q007
R034
R028
R035
L005
C008
C009
PB
ZOOM
S008
R011
R016
R022
R012
R023
D002
D006
K K
A
S005
MENU
LND002
S004
SEL/PUSH
EXEC
1-676-757-

CF-71 BOARD (SIDE B)


TITLE
EXPOSURE
S006
S007
R020
R017
CN001
45
1
R009
R003
R002
R004
R001
Q002
Q003
R008
R010
D001
D009
R046
R005
R007
R006
R025
R051
CN004
20
2
19
1
L003
C006
CN005
2
4
1
R039
R040
R041
CN008
1
2
4
1-676-757-
11
A
B
C
D
E
9
8
7
6
5
4
3
2
1
05

FK-10000 (CONTROL SWITCH BLOCK) SCHEMATIC DIAGRAM


1
2
3
4
5
6
7
8
A
B
C
D
E
F
G
CONTROL SWITCH
BLOCK (FK-10000)
VC-235 BOARD (10/16)
CN1107
(SEE PAGE 4-33)
REG_GND 12
NC 11
XEJECT_SW 10
LED_5V 9
KEY_AD0 8
XIR_LED_ON 7
KEY_AD1 6
XPHOTO_FREEZE 5
D_2.8V 4
XMS_LED 3
ZOOM_VR 2
REG_GND 1
12P
EJECT
S012
RV001
ZOOM
(MS LED)
R016
XX
R017
XX
D011
XX
D013
XX
D001
D001,S001
SUPER LASER
AVLINK
R007
180
D002
XX
S001
D003,S002
STOP
D004,S003
FF
D005,006
S004,005
REC
EDITSEARCH
+
-
S002
S003
S004
S005
S006
S007
R001
10k
R002
1200
R003
1500
R004
2200
VTR REC MODEL
R005
3900
R006
8200
D003
TLAU100B(TO5,SOY)
R008
180
D004
TLAU100B(TO5,SOY)
D005
TLAU100B(TO5,SOY)
R009
180
D006
TLAU100B(TO5,SOY)
S013
(PHOTO FREEZE)
D007,S009
PAUSE
D008,S010
REW
D009,S010
PLAY
R010
10k
S014
(PHOTO START)
S009
S010
S011
R011
1200
R012
1500
R013
2200
S013,014
PHOTO
D007
TLAU100B(TO5,SOY)
R014
470
D008
TLAU100B(TO5,SOY)
R015
180
D009
TLAU100B(TO5,SOY)
05

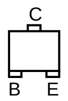
• CONTROL SWITCH BLOCK(FK-10000) is replaced as a block so that this PRINTED WIRING BOARD is omitted.

VTR REC MODEL:DCR-TRV120/TRV120E:E,HK,AUS,CN,JE/TRV120P

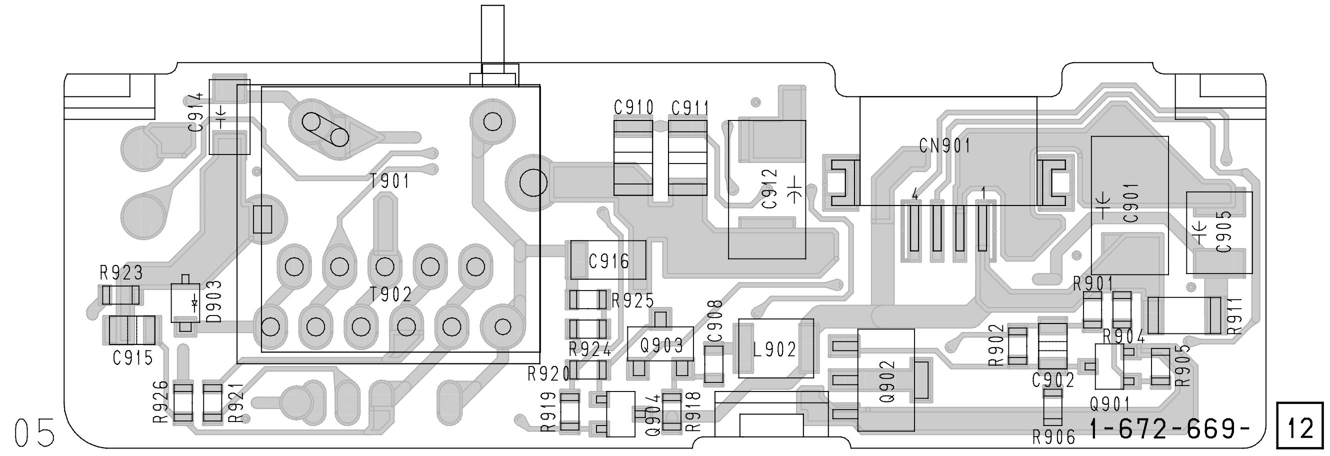
VF-129 (B/W EVF) PRINTED WIRING BOARD

– Ref. No.: VF-129 board; 20,000 series –

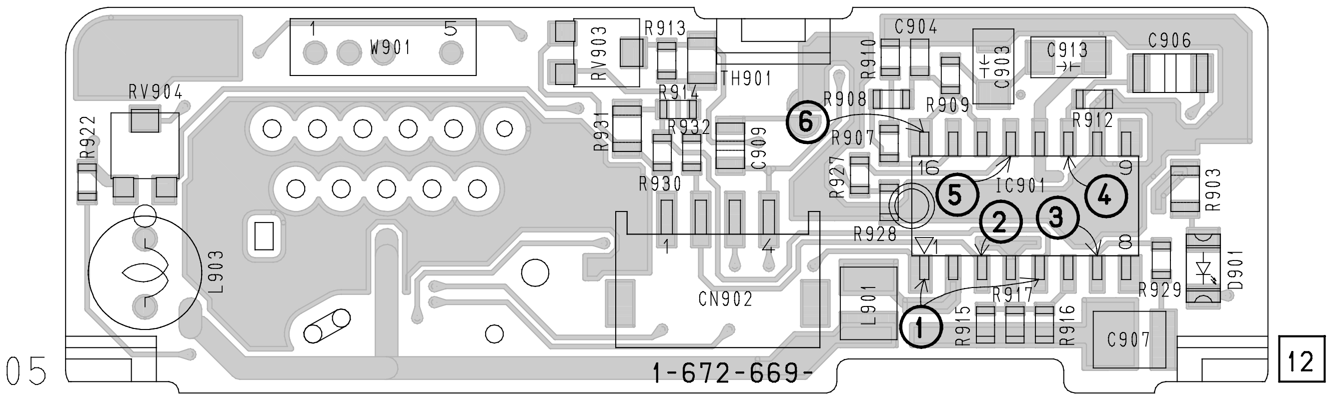
- **For Printed Wiring Board.**
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



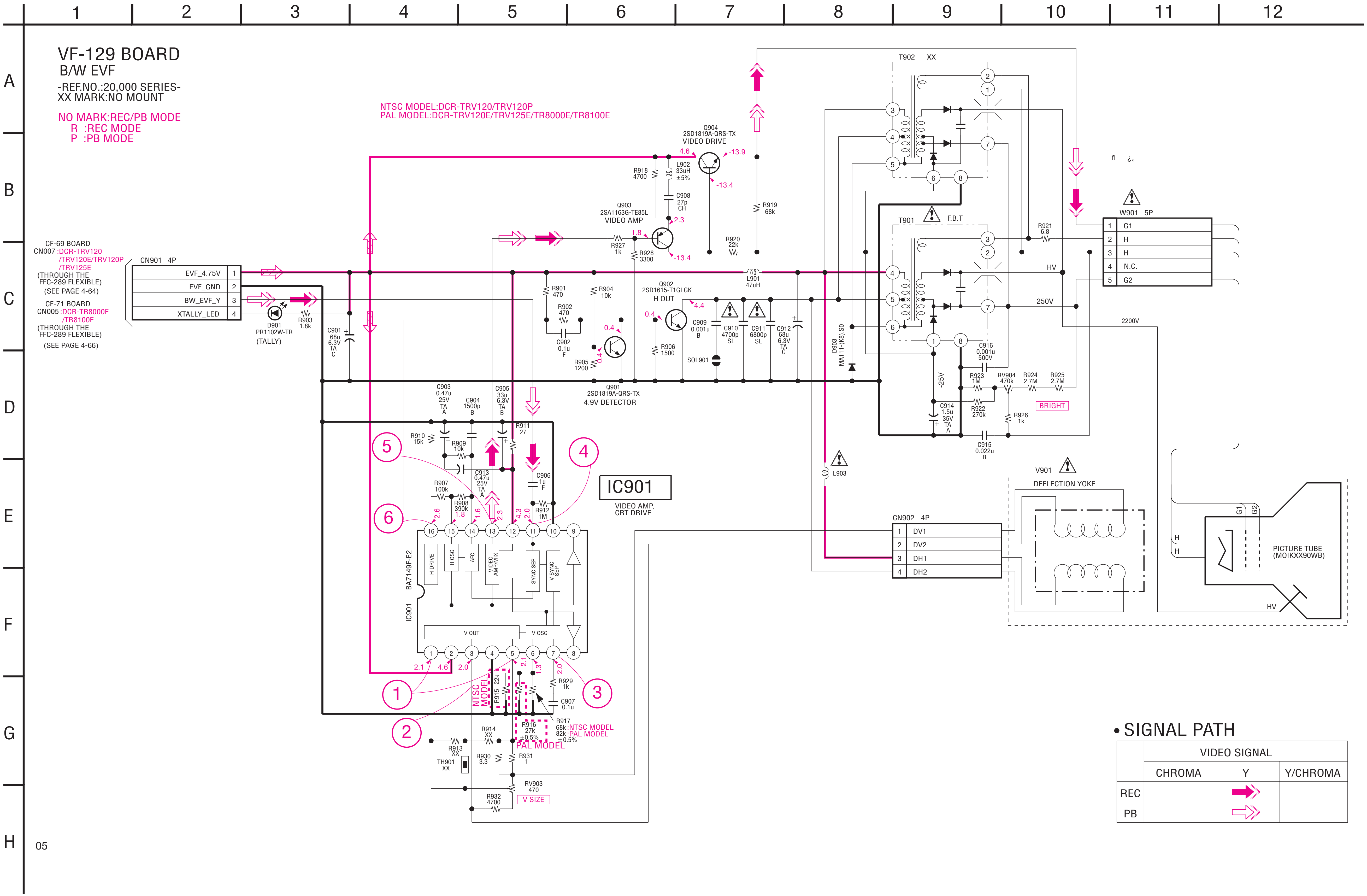
VF-129 BOARD(SIDE A)


C914
T901
T902
C910
C911
C912
CN901
C901
C905
C916
R923
D903
R925
C908
L902
R901
R911
R904
R905
C915
R924
Q903
R902
R920
Q902
C902
R926
R921
R919
Q904
R918
Q901
R906
1-672-669-
12
05

VF-129 BOARD(SIDE B)


1
5
W901
RV903
R913
C904
R910
C903
C913
C906
RV904
R914
TH901
R908
R909
R922
R931
R932
R907
R912
C909
R927
16
9
IC901
R903
R930
6
5
4
2
3
8
1
4
R928
L903
CN902
L901
R917
R929
D901
R915
R916
C907
1-672-669-
12
05

VF-129 (B/W EVF) SCHEMATIC DIAGRAM • See page 4-90 for waveforms.


VF-129 BOARD
B/W EVF
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R :REC MODE
P :PB MODE
NTSC MODEL:DCR-TRV120/TRV120P
PAL MODEL:DCR-TRV120E/TRV125E/TR8000E/TR8100E
CF-69 BOARD
CN007 :DCR-TRV120
/TRV120E/TRV120P
/TRV125E
(THROUGH THE
FFC-289 FLEXIBLE)
(SEE PAGE 4-64)
CF-71 BOARD
CN005 :DCR-TR8000E
/TR8100E
(THROUGH THE
FFC-289 FLEXIBLE)
(SEE PAGE 4-66)
CN901 4P
EVF_4.75V
EVF_GND
BW_EVF_Y
XTALLY_LED
D901
PR1102W-TR
(TALLY)
R903 1.8k
C901 68u 6.3V TA C
Q904
2SD1819A-QRS-TX
VIDEO DRIVE
Q903
2SA1163G-TE85L
VIDEO AMP
Q902
2SD1615-T1GLGK
H OUT
Q901
2SD1819A-QRS-TX
4.9V DETECTOR
R918 4700
L902 33uH ±5%
C908 27p CH
R919 68k
R920 22k
R927 1k
R928 3300
R901 470
R904 10k
R902 470
C902 0.1u F
R905 1200
R906 1500
L901 47uH
C909 0.001u B
C910 4700p SL
C911 6800p SL
C912 68u 6.3V TA C
SOL901
D903 MA111-(K8).S0
T902 XX
T901 F.B.T
R921 6.8
HV
250V
2200V
-25V
C916 0.001u 500V
R923 1M
RV904 470k
R924 2.7M
R925 2.7M
BRIGHT
R922 270k
R926 1k
C914 1.5u 35V TA A
C915 0.022u B
W901 5P
G1
H
H
N.C.
G2
L903
V901
DEFLECTION YOKE
CN902 4P
DV1
DV2
DH1
DH2
PICTURE TUBE
(MOIKXX90WB)
C903 0.47u 25V TA A
C904 1500p B
C905 33u 6.3V TA B
R911 27
R910 15k
R909 10k
C913 0.47u 25V TA A
C906 1u F
R907 100k
R908 390k
R912 1M
IC901
VIDEO AMP,
CRT DRIVE
BA7149F-E2
H DRIVE
H OSC
AFC
VIDEO AMP/MIX
SYNC SEP
V SYNC SEP
V OUT
V OSC
NTSC MODEL
PAL MODEL
R915 22k
R916 27k ±0.5%
R917
68k :NTSC MODEL
82k :PAL MODEL
±0.5%
R929 1k
C907 0.1u
R914 XX
R913 XX
TH901 XX
R930 3.3
R931 1
RV903 470
V SIZE
R932 4700
05

• SIGNAL PATH

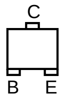
	VIDEO SIGNAL		
	CHROMA	Y	Y/CHROMA
REC		➡	
PB		⇨	

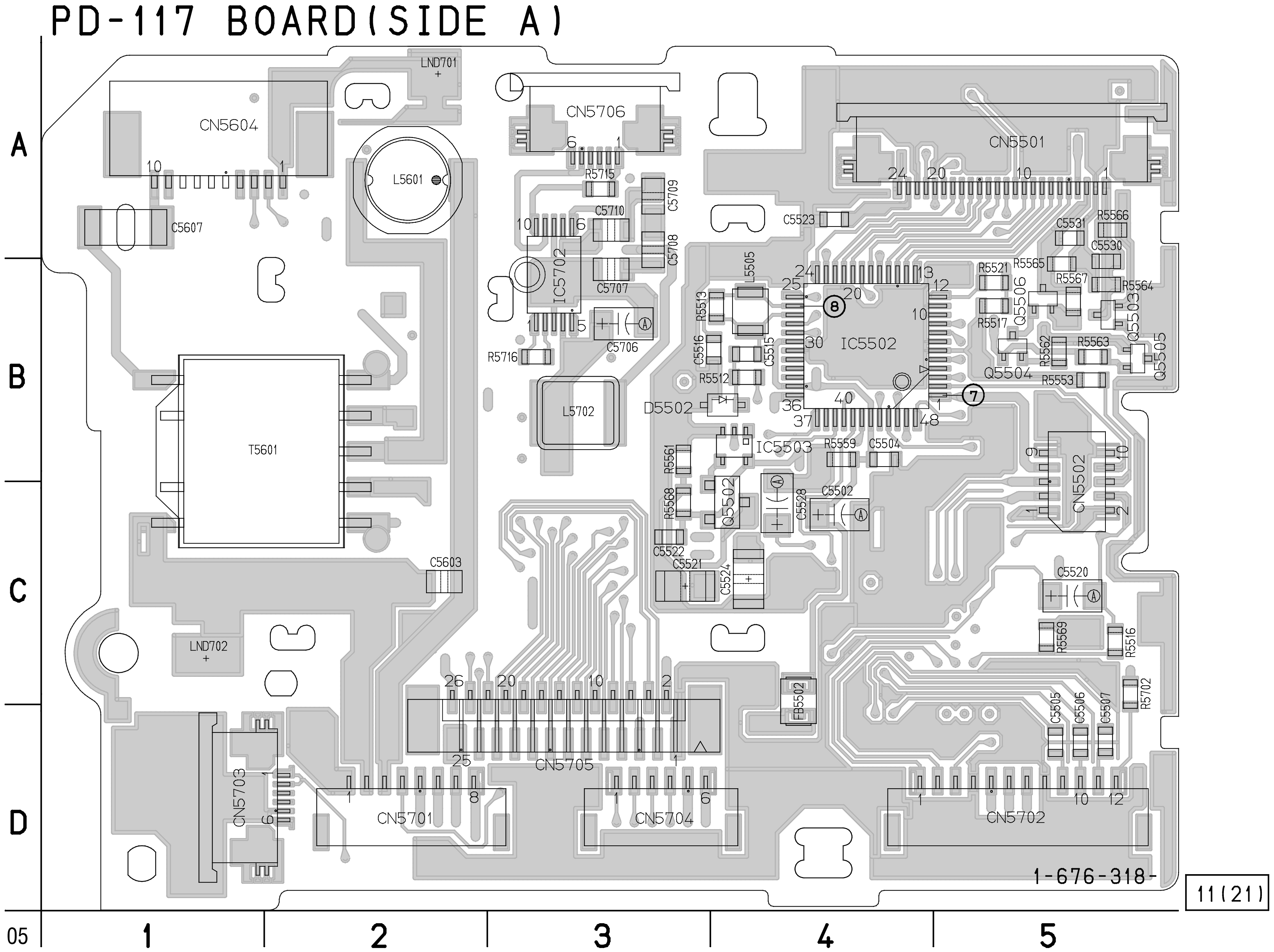
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

PD-117 (RGB/CG LCD DRIVER, TIMING GENERATOR, BACK LIGHT) PRINTED WIRING BOARD

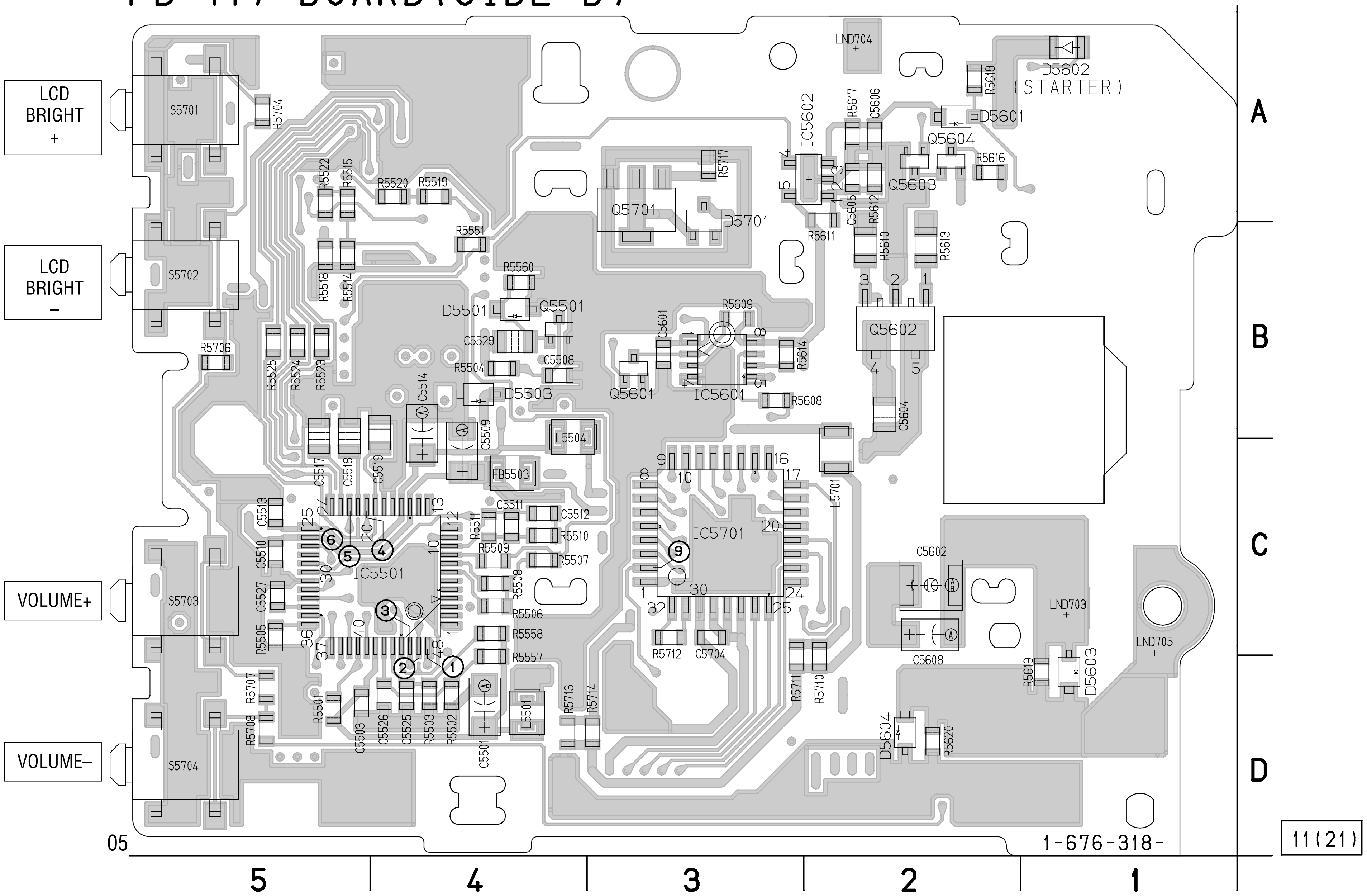
– Ref. No.: PD-117 board; 20,000 series –

- **For Printed Wiring Board.**
- PD-117 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 4-93 for printed parts location.
- Chip transistor

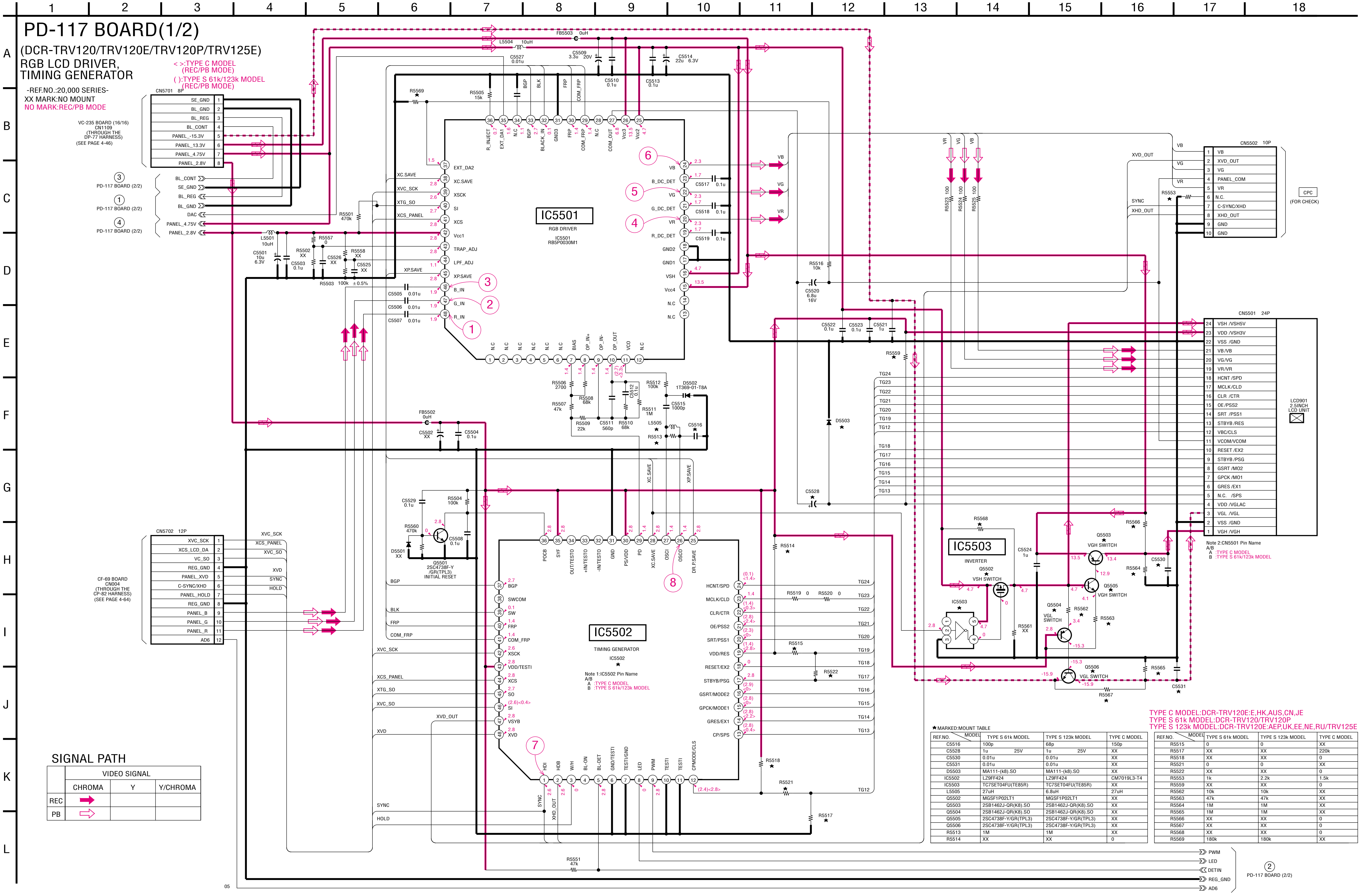



PD-117 BOARD(SIDE A)
A
B
C
D
05
1
2
3
4
5
LND701
CN5604
10
1
C5607
L5601
T5601
C5603
LND702
CN5703
6
CN5706
6
1
R5715
C5710
C5709
C5708
10
6
IC5702
1
5
C5707
C5706
R5716
L5702
L5505
R5513
C5516
C5515
R5512
D5502
IC5503
R5561
R5568
Q5502
C5522
C5521
C5524
C5528
C5502
R5559
C5504
CN5501
24
20
10
1
C5523
C5531
R5566
C5530
R5521
R5565
R5567
R5564
Q5506
Q5503
R5517
R5562
R5563
Q5504
R5553
Q5505
IC5502
24
25
20
13
12
10
30
36
37
40
48
8
7
CN5502
9
10
1
2
C5520
R5569
R5516
R5702
FB5502
C5505
C5506
C5507
CN5705
26
20
10
2
25
1
CN5701
8
CN5704
6
CN5702
10
12
1-676-318-
11(21)

PD-117 BOARD(SIDE B)


LCD BRIGHT +
LCD BRIGHT –
VOLUME+
VOLUME–
S5701
S5702
S5703
S5704
R5704
R5706
R5707
R5708
R5522
R5515
R5520
R5519
R5551
R5518
R5514
R5560
D5501
Q5501
C5529
R5504
C5508
D5503
R5525
R5524
R5523
C5514
C5509
L5504
FB5503
C5517
C5518
C5519
C5513
C5510
C5527
R5505
C5511
C5512
R5511
R5509
R5510
R5507
R5508
R5506
R5558
R5557
IC5501
R5501
C5503
C5526
C5525
R5503
R5502
C5501
L5501
R5713
R5714
Q5701
D5701
R5717
LND704
IC5602
R5617
C5606
C5605
R5612
R5611
R5618
D5602
(STARTER)
D5601
Q5604
R5616
Q5603
R5610
R5613
Q5602
C5601
R5609
Q5601
IC5601
R5614
R5608
C5604
L5701
IC5701
R5712
C5704
R5711
R5710
C5602
C5608
LND703
LND705
R5619
D5603
D5604
R5620
1-676-318-
05
11(21)
A
B
C
D
5
4
3
2
1

PD-117 (RGB LCD DRIVER, TIMING GENERATOR) SCHEMATIC DIAGRAM • See page 4-75 for PD-117 printed wiring board. • See page 4-89 for waveforms.


1
2
3
4
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12
13
14
15
16
17
18
A
B
C
D
E
F
G
H
I
J
K
L
PD-117 BOARD(1/2)
(DCR-TRV120/TRV120E/TRV120P/TRV125E)
RGB LCD DRIVER,
TIMING GENERATOR
< >:TYPE C MODEL
(REC/PB MODE)
( ):TYPE S 61k/123k MODEL
(REC/PB MODE)
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
VC-235 BOARD (16/16) CN1109 (THROUGH THE DP-77 HARNESS) (SEE PAGE 4-46)
CN5701 8P
SE_GND
BL_GND
BL_REG
BL_CONT
PANEL_-15.3V
PANEL_13.3V
PANEL_4.75V
PANEL_2.8V
PD-117 BOARD (2/2)
IC5501
RGB DRIVER
IC5501 RB5P0030M1
IC5502
TIMING GENERATOR
Note 1:IC5502 Pin Name A/B
A :TYPE C MODEL
B :TYPE S 61k/123k MODEL
IC5503
INVERTER
Q5502 VSH SWITCH
Q5503 VGH SWITCH
Q5504 VGL SWITCH
Q5505 VGH SWITCH
Q5506 VGL SWITCH
Q5501 2SC4738F-Y/GR(TPL3) INITIAL RESET
D5502 1T369-01-T8A
CN5502 10P
CPC (FOR CHECK)
CN5501 24P
LCD901 2.5INCH LCD UNIT
Note 2:CN5501 Pin Name A/B
A :TYPE C MODEL
B :TYPE S 61k/123k MODEL
CN5702 12P
CF-69 BOARD CN004 (THROUGH THE CP-82 HARNESS) (SEE PAGE 4-64)
XVC_SCK
XCS_LCD_DA
VC_SO
REG_GND
PANEL_XVD
C-SYNC/XHD
PANEL_HOLD
REG_GND
PANEL_B
PANEL_G
PANEL_R
AD6
PWM
LED
DETIN
REG_GND
AD6
PD-117 BOARD (2/2)

SIGNAL PATH

VIDEO SIGNAL			
	CHROMA	Y	Y/CHROMA
REC	➡		
PB	⇨		

TYPE C MODEL:DCR-TRV120E:E,HK,AUS,CN,JE
TYPE S 61k MODEL:DCR-TRV120/TRV120P
TYPE S 123k MODEL:DCR-TRV120E:AEP,UK,EE,NE,RU/TRV125E

★MARKED:MOUNT TABLE

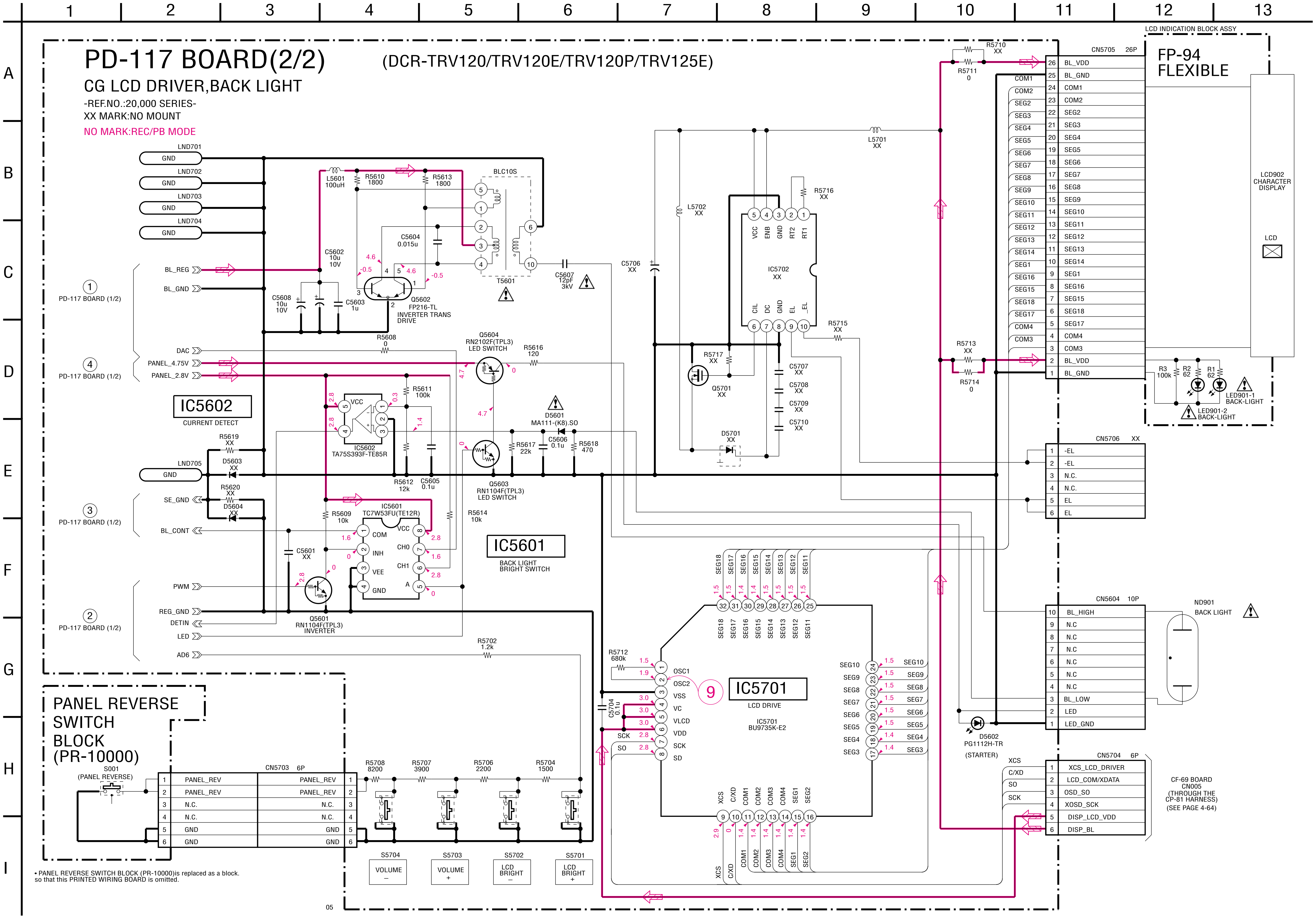
REF.NO. \ MODEL	TYPE S 61k MODEL	TYPE S 123k MODEL	TYPE C MODEL
C5516	100p	68p	150p
C5528	1u 25V	1u 25V	XX
C5530	0.01u	0.01u	XX
C5531	0.01u	0.01u	XX
D5503	MA111-(k8).SO	MA111-(k8).SO	XX
IC5502	LZ9FF424	LZ9FF424	CM7019L3-T4
IC5503	TC7SET04FU(TE85R)	TC7SET04FU(TE85R)	XX
L5505	27uH	6.8uH	27uH
Q5502	MGSF1P02LT1	MGSF1P02LT1	XX
Q5503	2SB1462J-QR(K8).SO	2SB1462J-QR(K8).SO	XX
Q5504	2SB1462J-QR(K8).SO	2SB1462J-QR(K8).SO	XX
Q5505	2SC4738F-Y/GR(TPL3)	2SC4738F-Y/GR(TPL3)	XX
Q5506	2SC4738F-Y/GR(TPL3)	2SC4738F-Y/GR(TPL3)	XX
R5513	1M	1M	XX
R5514	XX	XX	0

REF.NO. \ MODEL	TYPE S 61k MODEL	TYPE S 123k MODEL	TYPE C MODEL
R5515	0	0	XX
R5517	XX	XX	220k
R5518	XX	XX	0
R5521	0	0	XX
R5522	XX	XX	0
R5553	1k	2.2k	1.5k
R5559	XX	XX	0
R5562	10k	10k	XX
R5563	47k	47k	XX
R5564	1M	1M	XX
R5565	1M	1M	XX
R5566	XX	XX	0
R5567	XX	XX	0
R5568	XX	XX	0
R5569	180k	180k	XX

RGB LCD DRIVER, TIMING GENERATOR
PD-117 (1/2)

PR-10000 (PANEL REVERSE SWITCH BLOCK), PD-117 (CG LCD DRIVER, BACK LIGHT) SCHEMATIC DIAGRAM

- See page 4-75 for PD-117 printed wiring board.
- See page 4-89 for waveforms.


PD-117 BOARD(2/2)
(DCR-TRV120/TRV120E/TRV120P/TRV125E)
CG LCD DRIVER,BACK LIGHT
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
LND701 GND
LND702 GND
LND703 GND
LND704 GND
LND705 GND
BL_REG
BL_GND
PD-117 BOARD (1/2)
DAC
PANEL_4.75V
PANEL_2.8V
SE_GND
BL_CONT
PWM
REG_GND
DETIN
LED
AD6
L5601 100uH
R5610 1800
R5613 1800
BLC10S
T5601
C5604 0.015u
C5602 10u 10V
C5608 10u 10V
C5603 1u
Q5602 FP216-TL INVERTER TRANS DRIVE
C5607 12pF 3kV
C5706 XX
R5608 0
Q5604 RN2102F(TPL3) LED SWITCH
R5616 120
IC5602
CURRENT DETECT
IC5602 TA75S393F-TE85R
R5611 100k
D5601 MA111-(K8).SO
R5617 22k
C5606 0.1u
R5618 470
Q5603 RN1104F(TPL3) LED SWITCH
R5612 12k
C5605 0.1u
R5619 XX
D5603 XX
R5620 XX
D5604 XX
R5609 10k
IC5601 TC7W53FU(TE12R)
COM
INH
VEE
GND
VCC
CH0
CH1
A
C5601 XX
Q5601 RN1104F(TPL3) INVERTER
R5614 10k
IC5601
BACK LIGHT BRIGHT SWITCH
R5702 1.2k
L5701 XX
L5702 XX
R5716 XX
IC5702 XX
VCC ENB GND RT2 RT1
CIL DC GND EL _EL
R5715 XX
R5717 XX
Q5701 XX
C5707 XX
C5708 XX
C5709 XX
C5710 XX
D5701 XX
R5710 XX
R5711 0
R5713 XX
R5714 0
CN5705 26P
BL_VDD BL_GND COM1 COM2 SEG2 SEG3 SEG4 SEG5 SEG6 SEG7 SEG8 SEG9 SEG10 SEG11 SEG12 SEG13 SEG14 SEG1 SEG16 SEG15 SEG18 SEG17 COM4 COM3 BL_VDD BL_GND
LCD INDICATION BLOCK ASSY
FP-94 FLEXIBLE
LCD902 CHARACTER DISPLAY
LCD
R3 100k
R2 62
R1 62
LED901-1 BACK-LIGHT
LED901-2 BACK-LIGHT
CN5706 XX
-EL -EL N.C. N.C. EL EL
CN5604 10P
BL_HIGH N.C N.C N.C N.C N.C N.C BL_LOW LED LED_GND
ND901 BACK LIGHT
D5602 PG1112H-TR (STARTER)
CN5704 6P
XCS_LCD_DRIVER
LCD_COM/XDATA
OSD_SO
XOSD_SCK
DISP_LCD_VDD
DISP_BL
CF-69 BOARD CN005 (THROUGH THE CP-81 HARNESS) (SEE PAGE 4-64)
R5712 680k
C5704 0.1u
IC5701
LCD DRIVE
IC5701 BU9735K-E2
OSC1 OSC2 VSS VC VLCD VDD SCK SD
XCS C/XD COM1 COM2 COM3 COM4 SEG1 SEG2
SEG18 SEG17 SEG16 SEG15 SEG14 SEG13 SEG12 SEG11
SEG10 SEG9 SEG8 SEG7 SEG6 SEG5 SEG4 SEG3
PANEL REVERSE SWITCH BLOCK (PR-10000)
S001 (PANEL REVERSE)
CN5703 6P
PANEL_REV PANEL_REV N.C. N.C. GND GND
R5708 8200
R5707 3900
R5706 2200
R5704 1500
S5704 VOLUME –
S5703 VOLUME +
S5702 LCD BRIGHT –
S5701 LCD BRIGHT +
05

• PANEL REVERSE SWITCH BLOCK (PR-10000)is replaced as a block. so that this PRINTED WIRING BOARD is omitted.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

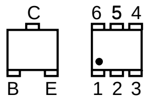
PANEL REVERSE SWITCH BLOCK/CG LCD DRIVER, BACK LIGHT
PR-10000 / PD-117 (2/2)

FU-138/143 (DC IN) PRINTED WIRING BOARD

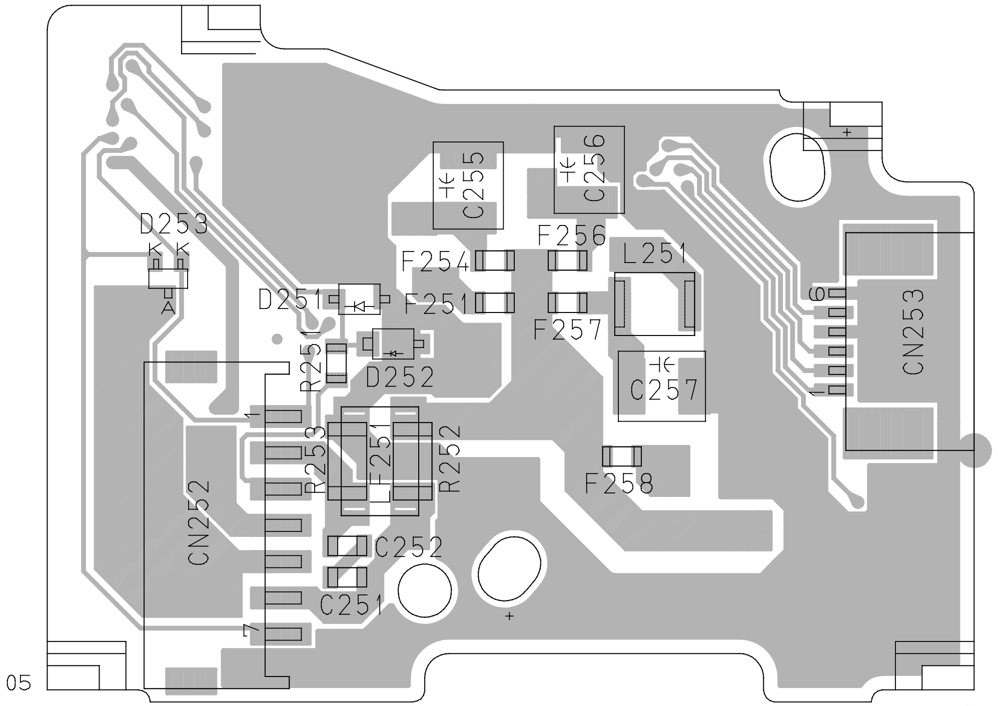
– Ref. No.: FU-138 board; 20,000 series –

• For Printed Wiring Board.

- There are few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor



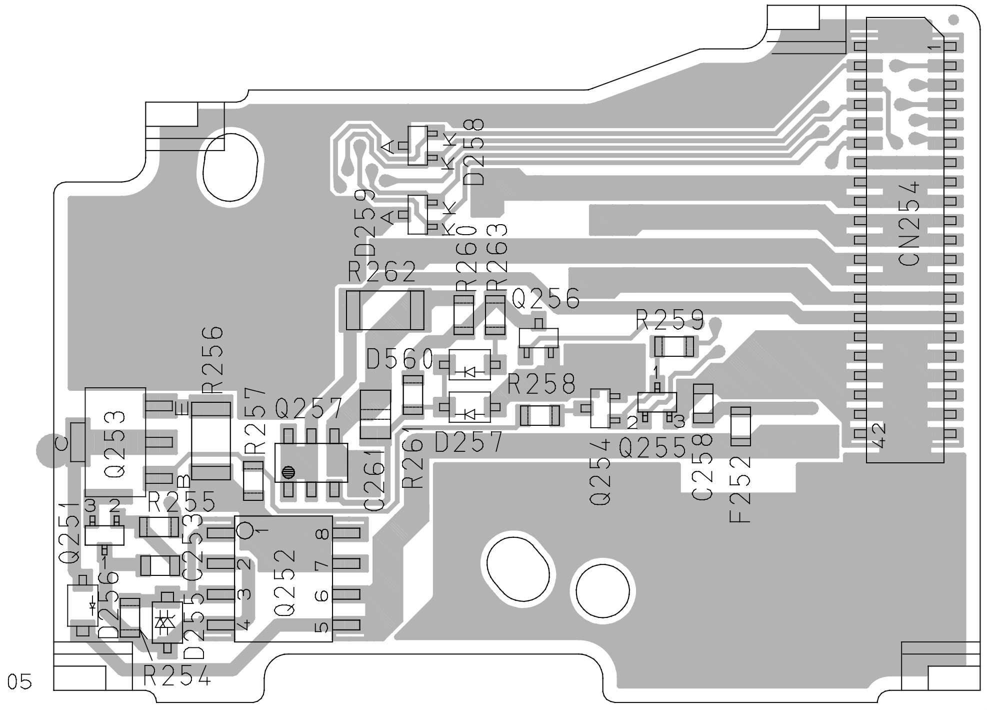
FU-138/143 BOARD (SIDE A)


D253
K K
A
D251
R251
D252
F254
F251
F256
C255
C256
L251
F257
C257
9
1
CN253
F258
CN252
1
7
R253
F251
R252
C252
C251
+
+
05

FU-138:1-676-775- 11(21)

FU-143:1-676-756- 11

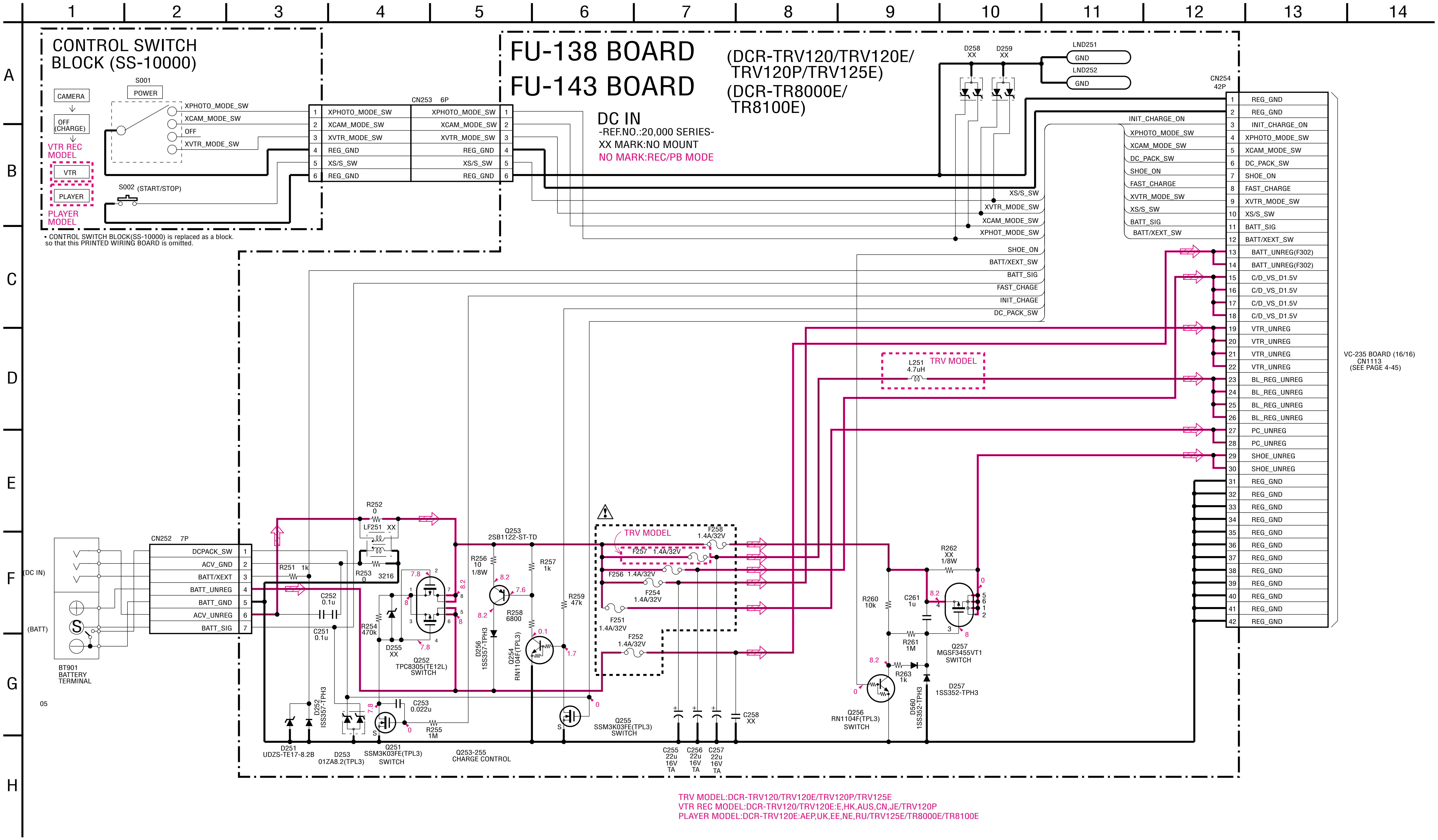
FU-138/143 BOARD (SIDE B)


1
42
CN254
D258
K K
A
D259
A
K K
R260
R263
R262
Q256
R259
R256
D560
R258
Q257
R257
R261
D257
Q254
Q255
C258
F252
C
Q253
E
B
R255
C261
Q251
C253
Q252
1 2 3 4
8 7 6 5
D256
D255
R254
05

FU-138:1-676-775- 11(21)

FU-143:1-676-756- 11

SS-10000 (CONTROL SWITCH BLOCK), FU-138/143 (DC IN) SCHEMATIC DIAGRAM

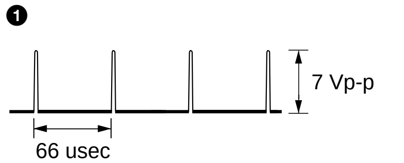

CONTROL SWITCH BLOCK (SS-10000)
S001 POWER
CAMERA
OFF (CHARGE)
VTR REC MODEL
VTR
PLAYER
PLAYER MODEL
XPHOTO_MODE_SW
XCAM_MODE_SW
OFF
XVTR_MODE_SW
S002 (START/STOP)
• CONTROL SWITCH BLOCK(SS-10000) is replaced as a block. so that this PRINTED WIRING BOARD is omitted.
CN253 6P
FU-138 BOARD
FU-143 BOARD
(DCR-TRV120/TRV120E/ TRV120P/TRV125E)
(DCR-TR8000E/ TR8100E)
DC IN
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
D258 XX
D259 XX
LND251 GND
LND252 GND
CN254 42P
VC-235 BOARD (16/16) CN1113 (SEE PAGE 4-45)
L251 4.7uH
TRV MODEL
CN252 7P
DCPACK_SW
ACV_GND
BATT/XEXT
BATT_UNREG
BATT_GND
ACV_UNREG
BATT_SIG
(DC IN)
(BATT)
BT901 BATTERY TERMINAL
R251 1k
R252 0
LF251 XX
R253 0
C252 0.1u
C251 0.1u
R254 470k
D255 XX
Q252 TPC8305(TE12L) SWITCH
Q253 2SB1122-ST-TD
R256 10 1/8W
R257 1k
R258 6800
R259 47k
D256 1SS357-TPH3
Q254 RN1104F(TPL3)
F258 1.4A/32V
F257 1.4A/32V
F256 1.4A/32V
F254 1.4A/32V
F251 1.4A/32V
F252 1.4A/32V
D251 UDZS-TE17-8.2B
D252 1SS357-TPH3
D253 01ZA8.2(TPL3)
Q251 SSM3K03FE(TPL3) SWITCH
C253 0.022u
R255 1M
Q253-255 CHARGE CONTROL
Q255 SSM3K03FE(TPL3) SWITCH
C255 22u 16V TA
C256 22u 16V TA
C257 22u 16V TA
C258 XX
R260 10k
C261 1u
R261 1M
R262 XX 1/8W
R263 1k
Q256 RN1104F(TPL3) SWITCH
Q257 MGSF3455VT1 SWITCH
D257 1SS352-TPH3
D560 1SS352-TPH3
05
1 REG_GND
2 REG_GND
3 INIT_CHARGE_ON
4 XPHOTO_MODE_SW
5 XCAM_MODE_SW
6 DC_PACK_SW
7 SHOE_ON
8 FAST_CHARGE
9 XVTR_MODE_SW
10 XS/S_SW
11 BATT_SIG
12 BATT/XEXT_SW
13 BATT_UNREG(F302)
14 BATT_UNREG(F302)
15 C/D_VS_D1.5V
16 C/D_VS_D1.5V
17 C/D_VS_D1.5V
18 C/D_VS_D1.5V
19 VTR_UNREG
20 VTR_UNREG
21 VTR_UNREG
22 VTR_UNREG
23 BL_REG_UNREG
24 BL_REG_UNREG
25 BL_REG_UNREG
26 BL_REG_UNREG
27 PC_UNREG
28 PC_UNREG
29 SHOE_UNREG
30 SHOE_UNREG
31 REG_GND
32 REG_GND
33 REG_GND
34 REG_GND
35 REG_GND
36 REG_GND
37 REG_GND
38 REG_GND
39 REG_GND
40 REG_GND
41 REG_GND
42 REG_GND

TRV MODEL:DCR-TRV120/TRV120E/TRV120P/TRV125E
VTR REC MODEL:DCR-TRV120/TRV120E:E,HK,AUS,CN,JE/TRV120P
PLAYER MODEL:DCR-TRV120E:AEP,UK,EE,NE,RU/TRV125E/TR8000E/TR8100E

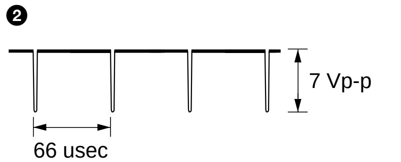
The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

4-3. WAVEFORMS

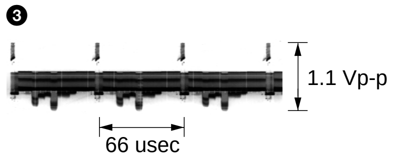
CD-242 BOARD

❶


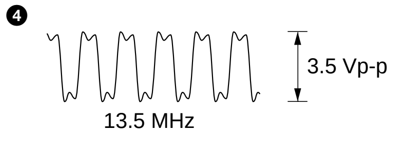
IC101 ①, ② REC/PB

❷


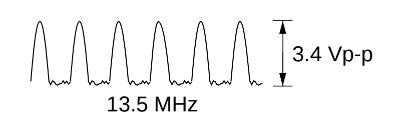
IC101 ③, ④ REC/PB

❸


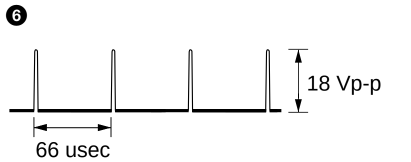
IC101 ⑦ REC/PB

❹


IC101 ⑬, ⑭ REC/PB

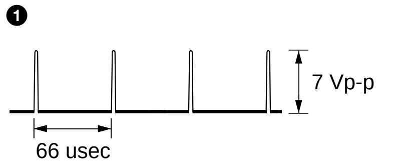
❺


IC101 ⑫ REC/PB

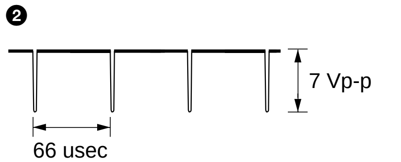
❻


IC101 ⑩ REC/PB

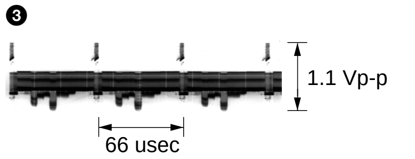
CD-244/269 BOARD

❶


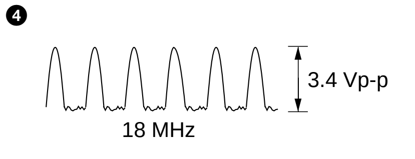
IC151 ①, ② REC/PB

❷


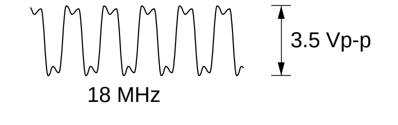
IC151 ③, ④ REC/PB

❸


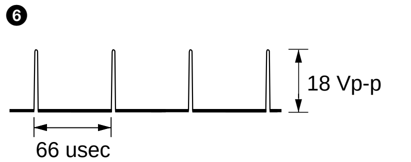
IC151 ⑧ REC/PB

❹


IC151 ⑩ REC/PB

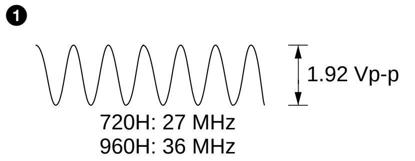
❺


IC151 ⑪, ⑫ REC/PB

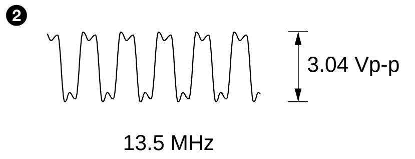
❻


IC151 ⑬ REC/PB

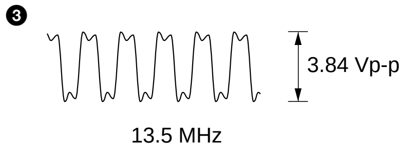
VC-235 BOARD

❶


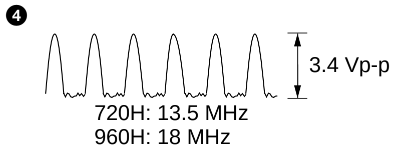
IC1501 ④ REC/PB

❷


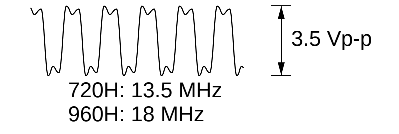
IC1501 ⑪ REC/PB

❸


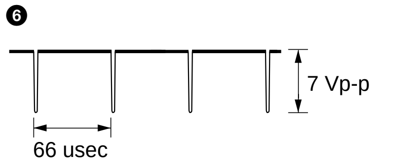
IC1501 ⑫ REC/PB

❹


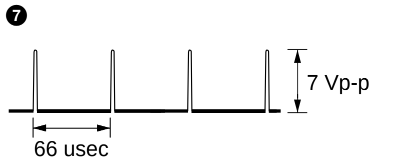
IC1501 ⑱ REC/PB

❺


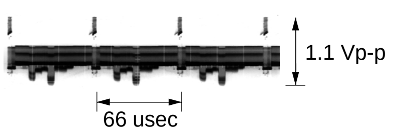
IC1501 ㉑, ㉒ REC/PB

❻


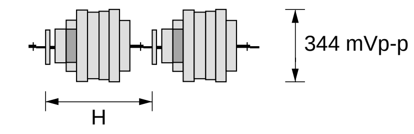
IC1501 ㉕, ㉖ REC/PB

❼


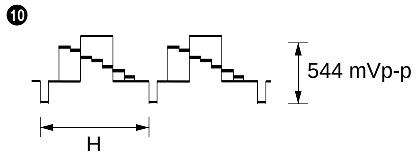
IC1501 ㉘, ㉛ REC/PB

❽


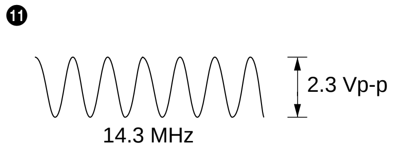
IC1502 ㉚ REC/PB

❾


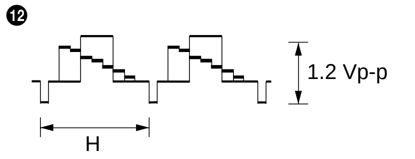
IC2201 (213)PB (Hi8/Std8)

❿


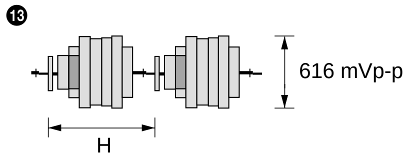
IC2201 ④ PB (Hi8/Std8)

⓫


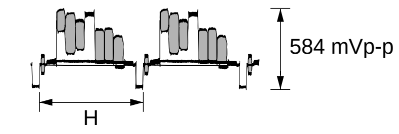
IC2201 (67) PB (Hi8/Std8)

⓬


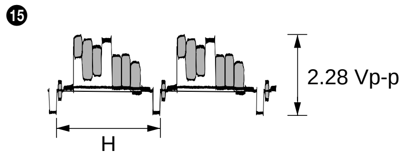
IC3701 ㊱ LINE REC/PB (Hi8/Std8)

⓭


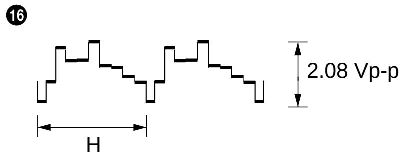
IC3701 ㉞ LINE REC/PB (Hi8/Std8)

⓮


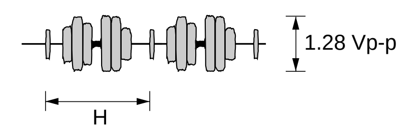
IC3701 ㉔ PB (IR ON)

⓯


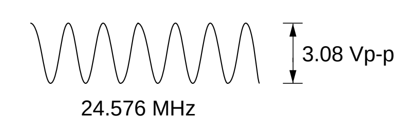
IC3701 ㉒ PB (A/V JACK USE)

⓰


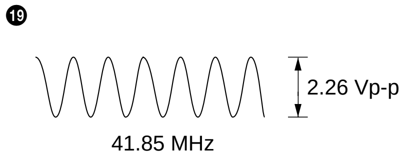
IC3701 ⑱ PB (S VIDEO JACK USE)

⓱


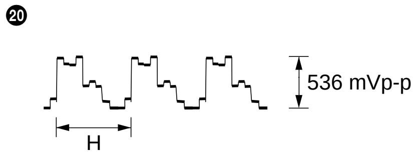
IC3701 ⑭ PB (S VIDEO JACK USE)

⓲


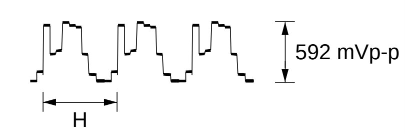
IC3301 (138)REC/PB

⓳


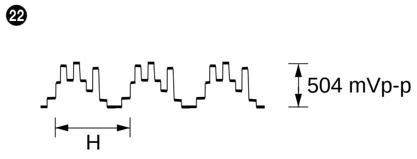
IC3301 (114)REC/PB

⓴


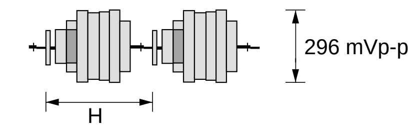
IC3301 (75) REC/PB

㉑


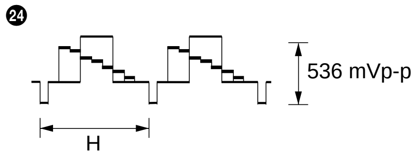
IC3301 (73) REC/PB

㉒


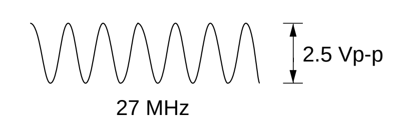
IC3301 (71) REC/PB

㉓


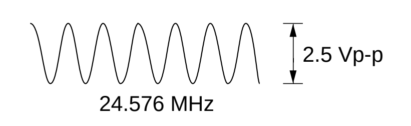
IC3301 (59) PB (Hi8/Std8)

㉔


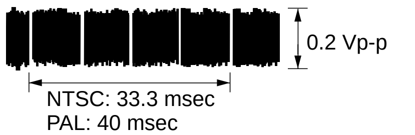
IC3301 (55) PB (Hi8/Std8)

㉕


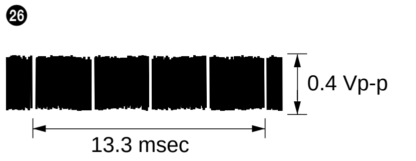
IC3301 ㊻ REC/PB (Hi8/Std8)

㉕


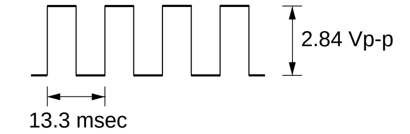
IC3301 ㊻ PB (Digital8)

㉖


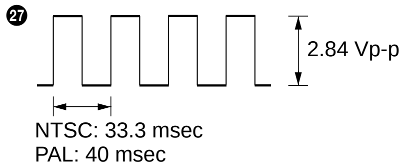
IC3103 ㉗, ㉙ PB (Hi8/Std8)

㉖


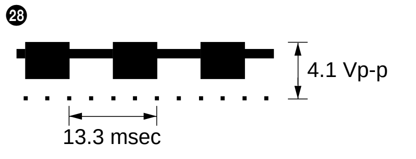
IC3103 ㉗, ㉙ PB (Digital8)

㉗


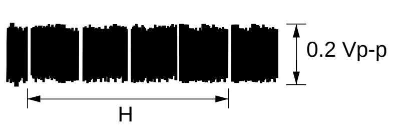
IC3103 ㉟ REC/PB (Digital8)

㉗


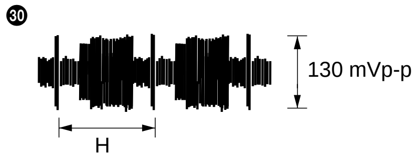
IC3103 ㉟ PB (Hi8/Std8)

㉘


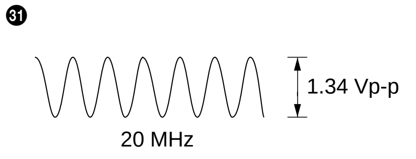
IC3103 ①, ②, ⑥, ⑦ REC

㉙


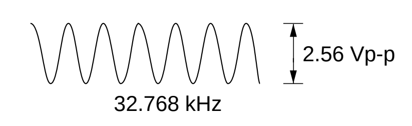
IC3201⑱ PB (Hi8/Std8)

㉚


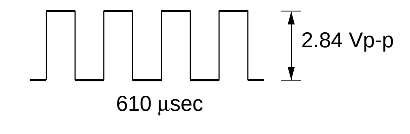
IC3201 ⑪ PB (Hi8/Std8)

㉛


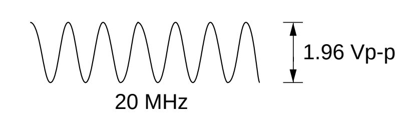
IC4803 ㊶ REC/PB

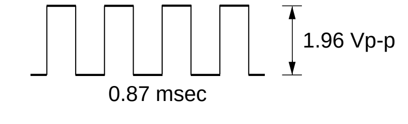
㉜


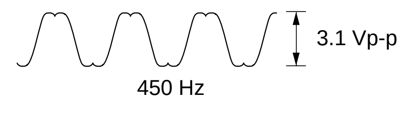
IC4803 (52) REC/PB

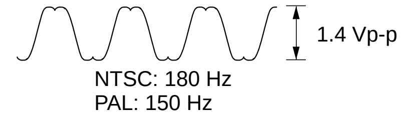
㉝


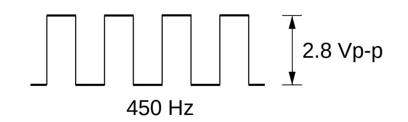
IC4501 (115) REC/PB

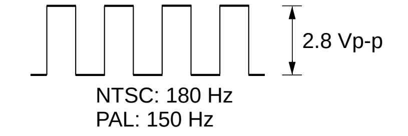
㉞

1.96 Vp-p
20 MHz
IC4902 ① REC/PB

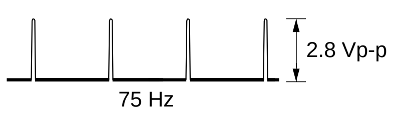
㉟

1.96 Vp-p
0.87 msec
IC4902 (115) PB (Hi8/Std8)

㊱

3.1 Vp-p
450 Hz
IC4401 (57), (59), (61) REC/PB (Digital8)

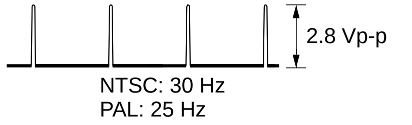
㊱

1.4 Vp-p
NTSC: 180 Hz
PAL: 150 Hz
IC4401 (57), (59), (61) PB (Hi8/Std8)

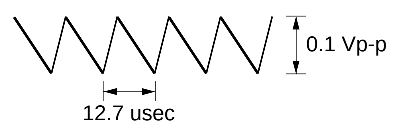
㊲

2.8 Vp-p
450 Hz
IC4401 ⑯ REC/PB (Digital8)

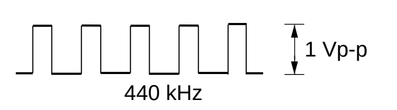
㊲

2.8 Vp-p
NTSC: 180 Hz
PAL: 150 Hz
IC4401 ⑯ PB (Hi8/Std8)

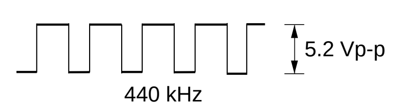
㊳


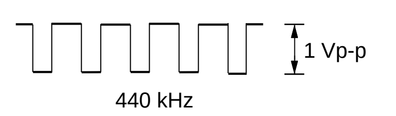
IC4401 ㉒ REC/PB (Digital8)

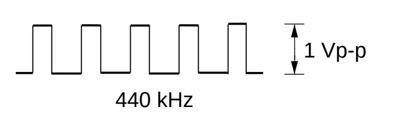
㊳

2.8 Vp-p
NTSC: 30 Hz
PAL: 25 Hz
IC4401 ㉒ PB (Hi8/Std8)

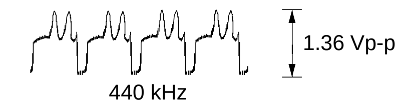
㊴

0.1 Vp-p
12.7 usec
IC4401 ㉙ REC/PB

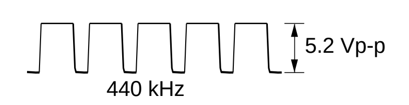
㊵

1 Vp-p
440 kHz
IC1301 ② REC/PB

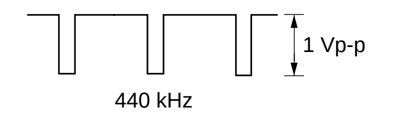
㊶

5.2 Vp-p
440 kHz
IC1301 ㊷ REC/PB

㊷

1 Vp-p
440 kHz
IC1301 ㊺ REC/PB

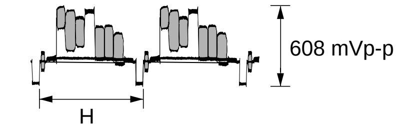
㊸

1 Vp-p
440 kHz
IC1301 ㊻ REC/PB

㊹

1.36 Vp-p
440 kHz
IC1301 ㊿ REC/PB

㊺

5.2 Vp-p
440 kHz
IC1301 (54) REC/PB

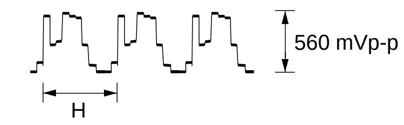
㊻

1 Vp-p
440 kHz
IC1301 (57) REC/PB

MI-37 BOARD

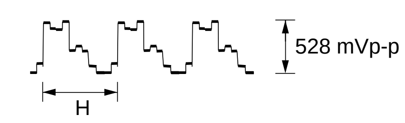
❶


IC3901 ㊶ REC/PB (IR ON)

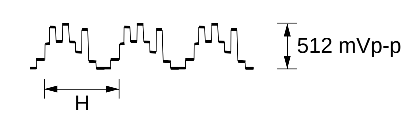
PD-117 BOARD

❶


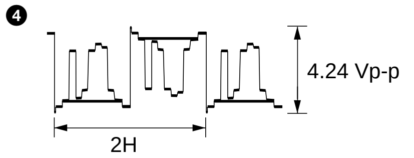
IC5501 ㊽ REC/PB

❷


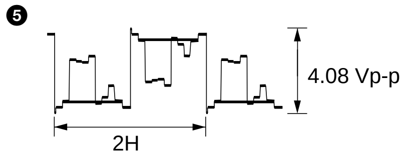
IC5501 ㊼ REC/PB

❸


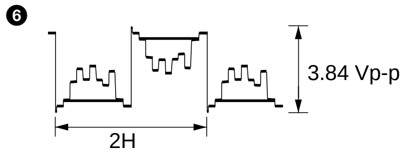
IC5501 ㊻ REC/PB

❹


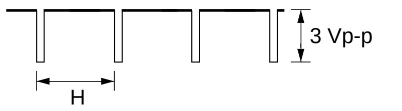
IC5501 ⑳ REC/PB

❺


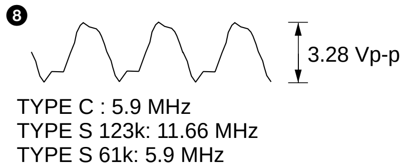
IC5501 ㉒ REC/PB

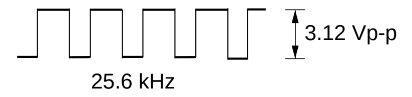
❻


IC5501 ㉔ REC/PB

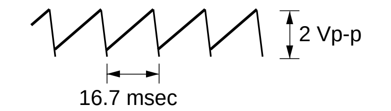
❼


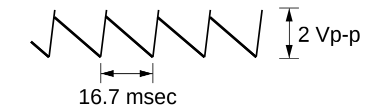
IC5502 ① REC/PB

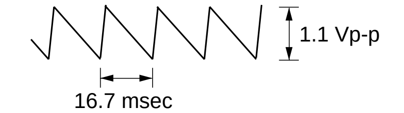
❽

3.28 Vp-p
TYPE C : 5.9 MHz
TYPE S 123k: 11.66 MHz
TYPE S 61k: 5.9 MHz
IC5502 ㉖ REC/PB

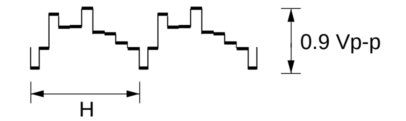
❾

3.12 Vp-p
25.6 kHz
IC5701 ② REC

VF-129 BOARD

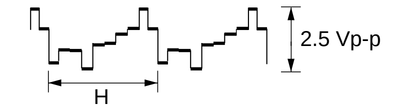
❶

2 Vp-p
16.7 msec
IC901 ①, ⑤ REC/PB

❷

2 Vp-p
16.7 msec
IC901 ③ REC/PB

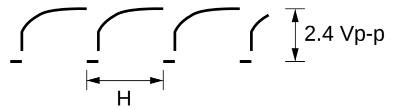
❸

1.1 Vp-p
16.7 msec
IC901 ⑦ REC/PB

❹


IC901 ⑪ REC/PB

❺


IC901 ⑬ REC/PB

❻


IC901 ⑯ REC/PB

4-4. PARTS LOCATION

＊: C1101 and R2256 are mounted on the board with suffix number -12 (22, 32)

VC-235 BOARD
(SIDE A)

C1320	B-6
C1322	B-6
C1333	C-8
C1335	C-8
C1336	C-8
C1338	A-8
C1339	C-8
C1340	C-7
C1341	C-8
C1342	B-9
C1343	C-7
C1345	C-8
C1346	C-9
C1347	C-7
C1348	B-9
C1350	C-7
C1352	B-6
C1353	A-6
C1354	C-5
C1355	A-6
C1356	C-8
C1357	F-4
C1508	B-5
C1513	B-4
C1514	B-4
C1515	B-5
C1516	B-4
C1517	B-4
C1518	B-4
C1519	B-4
C1520	B-4
C1521	B-4
C1522	B-4
C1523	B-4
C1525	B-5
C1552	A-5
C1554	A-5
C1558	B-5
C1559	B-5
C1560	A-5
C1561	A-4
C1562	A-5
C1564	A-5
C1565	B-5
C1566	B-5
C1568	B-5
C1570	A-5
C1572	A-5
C2201	F-4
C2202	F-4
C2203	E-3
C2204	E-4
C2208	E-4
C2210	E-3
C2211	E-3
C2212	E-4
C2213	E-3
C2214	C-4
C2215	D-4
C2222	D-4
C2223	D-4
C2224	D-4
C2225	C-4
C2226	E-3
C2227	E-4
C2228	D-3
C2229	D-4
C2230	E-4
C2233	C-4
C2234	E-4
C2236	C-4
C2238	C-4
C2240	B-3
C2242	E-6
C2243	D-6
C2244	C-3
C2247	E-4
C2250	C-4
C2291	E-6
C2292	F-7
C2293	F-6
C3111	E-6
C3121	F-5
C3122	F-5
C3123	F-5
C3124	F-5
C3126	F-5
C3127	F-5
C3128	F-4
C3131	F-4
C3133	F-4
C3134	F-6
C3135	F-6
C3136	F-6
C3138	F-5
C3139	F-6
C3201	G-3
C3202	G-2
C3203	G-2
C3204	F-2
C3205	F-3
C3206	F-2
C3207	F-3
C3208	F-2
C3210	F-3
C3211	F-3
C3212	F-3
C3213	F-3
C3214	F-3
C3215	F-3
C3216	F-3
C3217	F-3
C3218	F-3
C3320	C-6
C3327	C-6
C3349	B-3
C3350	B-3
C3351	C-3
C3701	F-1
C3704	F-2
C3705	F-2
C3706	F-2
C3707	F-2
C3708	F-2
C3709	F-2
C3710	F-2
C3711	F-2
C3712	F-2
C3713	F-2
C3714	F-2
C3715	F-3
C3716	F-3
C3717	F-2
C3718	F-2
C3719	E-2
C3723	E-2
C3724	E-2
C3728	E-2
C3729	E-2
C3730	E-2
C3731	E-2
C3732	E-3
C3733	E-3
C3734	E-2
C3735	E-2
C4401	G-8
C4402	G-9
C4403	G-7
C4404	G-8
C4405	G-8
C4406	G-8
C4407	G-8
C4408	F-8
C4409	G-6
C4410	G-9
C4411	G-6
C4412	G-6
C4413	F-7
C4414	G-8
C4415	F-8
C4416	F-8
C4417	F-7
C4418	F-9
C4419	F-7
C4420	F-8
C4421	F-7
C4424	F-7
C4425	F-8
C4426	F-9
C4427	F-9
C4428	E-7
C4429	E-7
C4430	E-8
C4431	E-8
C4432	F-9
C4433	E-7
C4434	E-7
C4435	E-8
C4436	E-8
C4801	A-6
C4821	B-5
C4822	B-6
CN1105	D-8
CN1107	A-7
CN1109	G-1
CN1111	F-1
CN1113	F-9
CN1551	A-5
CN3101	G-4
CN4401	G-2
CN4402	G-6
CN4403	G-7
CN4404	G-8
D1301	B-8
D1302	B-9
D1305	B-9
D1306	B-9
D1551	A-5
D2201	E-5
D2202	E-4
FB1504	C-5
FB2202	C-4
FB2203	D-3
FB2204	C-3
FB2205	B-3
FB2291	F-6
FB3701	F-1
FB4801	B-5
IC1302	B-6
IC1303	F-4
IC1502	B-4
IC1552	A-5
IC1553	A-4
IC2201	D-5
IC2202	E-4
IC2291	F-6
IC3103	F-5
IC3201	F-3
IC3202	F-3
IC3304	C-3
IC3701	E-2
IC4401	F-8
L1301	B-8
L1302	B-8
L1303	B-7
L1304	A-8
L1305	A-8
L1306	C-7
L1307	C-7
L1308	C-8
L1309	C-8
L1311	B-6
L1312	C-9
L1313	C-8
L1314	C-9
L1315	C-8
L1316	C-8
L1317	A-7
L1318	C-7
L1320	C-9
L1321	B-6
L2201	D-3
L2203	C-3
L2204	F-4
L2207	E-4
L2208	D-3
L2291	E-7
L3103	E-6
L3104	E-5
L3105	F-5
L3106	F-5
L3201	G-2
L3305	C-6
L3306	C-6
L3701	E-3
L3705	E-1
Q1104	D-7
Q1315	B-6
Q1316	C-7
Q1318	C-6
Q1320	C-6
Q1321	C-6
Q1322	A-6
Q1323	C-6
Q1324	A-6
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Q1326	A-6
Q1551	A-5
Q1554	B-5
Q2204	F-4
Q3103	F-4
Q3104	F-6
Q3105	F-5
Q3106	F-5
Q3108	F-6
Q3111	F-6
Q3116	F-5
Q3201	F-3
Q3701	G-1
Q4401	G-8
Q4402	E-8
Q4801	A-6
Q4802	A-6
Q4803	A-6
Q4805	A-6
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R1106	D-6
R1107	D-6
R1108	D-6
R1109	D-6
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R1117	E-7
R1118	E-7
R1119	E-7
R1120	E-7
R1121	E-6
R1122	E-6
R1123	E-7
R1124	D-7
R1125	D-8
R1129	C-7
R1130	C-7
R1134	D-7
R1145	C-7
R1308	A-6
R1315	F-4
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R1332	C-6
R1333	B-6
R1334	B-6
R1335	A-6
R1336	B-6
R1337	A-6
R1338	C-6
R1339	B-6
R1340	B-6
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R1342	A-6
R1343	A-6
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R1565	A-5
R1566	A-5
R1567	A-5
R1568	A-5
R1569	B-5
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R1573	A-5
R1574	B-5
R1575	A-5
R1576	B-5
R1577	B-5
R2205	F-4
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R2208	C-3
R2209	E-3
R2210	E-3
R2211	C-3
R2213	F-4
R2215	E-3
R2216	E-4
R2218	E-3
R2219	F-4
R2220	E-3
R2221	E-3
R2222	E-5
R2223	E-4
R2224	C-3
R2225	C-4
R2230	E-4
R2240	E-3
R2242	E-4
R2243	E-4
R2244	C-4
R2245	C-3
R2247	E-5
R2248	E-5
R2254	C-4
R2255	E-5
＊R2256	E-5
R3114	F-4
R3115	F-4
R3116	F-4
R3117	F-5
R3118	F-5
R3119	F-5
R3120	F-5
R3121	F-5
R3122	F-5
R3123	F-6
R3124	F-6
R3125	F-4
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R3127	F-6
R3129	F-5
R3130	F-5
R3131	F-4
R3132	F-5
R3133	F-5
R3136	F-5
R3137	F-6
R3138	F-5
R3143	F-5
R3144	F-5
R3205	F-3
R3206	F-2
R3210	F-3
R3211	F-4
R3212	F-3
R3213	F-3
R3214	F-3
R3215	G-2
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R3383	C-6
R3701	G-1
R3702	G-1
R3704	G-1
R3705	G-1
R3712	F-2
R3713	F-2
R3714	F-2
R3715	F-2
R3716	F-2
R3717	F-2
R3721	F-2
R3722	F-2
R3724	E-2
R3726	E-2
R3727	E-2
R3728	E-2
R3729	E-2
R3730	E-2
R3734	F-1
R4401	G-7
R4402	G-7
R4405	F-7
R4407	G-8
R4408	G-7
R4409	G-7
R4410	G-7
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R4413	G-8
R4414	G-9
R4416	F-8
R4417	F-9
R4423	F-8
R4424	F-9
R4425	F-7
R4426	F-7
R4427	F-8
R4428	F-7
R4429	F-7
R4430	F-9
R4431	F-8
R4432	E-8
R4434	E-7
R4435	E-7
R4436	E-8
R4437	F-8
R4438	F-8
R4442	G-8
R4443	G-7
R4444	E-8
R4445	G-8
R4446	E-8
R4447	G-7
R4448	G-7
R4801	A-6
R4802	A-6
R4805	A-6
R4806	A-6
R4807	A-6
R4809	A-6
R4810	A-6
R4851	D-8
R4876	B-6
T1301	A-9
X4802	B-6

VC-235 BOARD
(SIDE B)

＊C1101	A-4
C1301	C-8
C1302	C-7
C1303	C-7
C1304	C-8
C1305	C-8
C1306	C-7
C1307	C-8
C1308	C-8
C1309	C-7
C1310	C-8
C1311	C-7
C1312	C-8
C1313	B-7
C1314	B-8
C1315	B-7
C1316	B-8
C1317	B-8
C1318	B-8
C1319	B-7
C1321	A-8
C1323	B-8
C1326	B-8
C1327	B-8
C1328	A-9
C1329	B-7
C1330	A-8
C1331	A-8
C1332	A-7
C1334	A-9
C1337	A-9
C1344	A-7
C1351	C-9
C1359	A-9
C1501	B-5
C1502	B-5
C1503	B-5
C1504	B-5
C1505	B-5
C1506	B-5
C1507	B-4
C1509	B-4
C1511	C-5
C1512	C-4
C1524	B-4
C1556	A-5
C1563	B-4
C1569	A-5
C1571	A-5
C2232	C-4
C3102	E-5
C3104	F-4
C3105	E-5
C3107	F-4
C3108	F-5
C3109	F-5
C3110	F-5
C3112	F-5
C3113	F-5
C3114	F-5
C3115	F-5
C3116	F-4
C3117	F-5
C3118	F-5
C3119	F-4
C3120	F-5
C3137	G-5
C3141	G-5
C3142	G-4
C3143	G-4
C3144	G-5
C3301	D-3
C3302	F-4
C3303	C-3
C3305	E-4
C3306	D-3
C3307	E-4
C3308	E-4
C3309	C-4
C3310	E-4
C3311	C-5
C3312	E-5
C3313	E-6
C3314	E-6
C3315	C-6
C3316	C-6
C3317	E-6
C3318	E-6
C3319	E-6
C3321	C-5
C3322	E-6
C3323	D-6
C3324	C-6
C3325	C-6
C3326	C-6
C3328	C-6
C3329	G-2
C3331	G-1
C3332	G-1
C3333	G-2
C3334	C-3
C3335	G-2
C3337	F-1
C3338	G-1
C3342	C-6
C3343	C-5
C3345	C-5
C3346	E-5
C3348	E-6
C3601	C-7
C3603	D-7
C3604	C-6
C3608	D-7
C3610	C-8
C3611	D-6
C3612	D-6
C3613	D-7
C3614	D-7
C3615	D-7
C3616	D-7
C3617	D-7
C3618	D-7
C3619	D-7
C3620	D-7
C3621	D-8
C3622	D-6
C3626	D-8
C3628	D-8
C3629	D-8
C3630	E-8
C3631	E-6
C3632	E-8
C3633	E-7
C3634	E-7
C3636	D-6
C4501	G-6
C4504	F-7
C4505	F-7
C4506	F-7
C4507	E-7
C4508	F-7
C4509	G-6
C4510	E-6
C4802	E-8
C4803	E-9
C4804	F-9
C4805	E-9
C4806	A-6
C4807	A-6
C4808	A-7
C4809	A-7
C4810	A-7
C4811	A-7
C4812	A-6
C4813	A-6
C4814	A-6
C4816	A-6
C4817	A-6
C4819	C-6
C4820	B-5
C4823	B-5
C4824	A-5
C4825	A-5
C4826	A-5
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C5711	G-2
C5712	G-3
C5713	E-3
C5714	G-3
C5715	E-3
C5716	G-3
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C5718	F-3
C5719	E-3
C5720	F-3
C5721	F-3
C5722	E-3
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C5724	E-3
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C5730	G-4
C5731	F-4
C5732	E-3
C5733	F-4
C5734	E-3
C5735	F-4
C5736	G-4
C5737	E-3
C5738	G-4
C5739	E-3
C5740	F-4
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C5742	G-4
C5743	F-4
C5744	F-4
C5745	F-4
C5746	F-4
C5747	F-4
C5748	F-4
C5749	F-4
C5750	E-2
C5751	E-2
C5752	E-1
C5753	E-1
C5754	E-2
C5755	E-2
C5756	E-1
C5757	E-1
C5758	G-3
C5759	G-4
CN1101	A-4
CN1103	F-1
CN1108	C-9
D1101	A-4
D1102	A-4
D1103	A-7
D1104	A-8
D3301	E-6
D3302	E-6
D3303	C-6
D3304	C-6
D4401	D-8
D4801	E-8
D4802	E-9
D4803	E-8
D4804	E-9
FB1501	B-4
FB1502	B-4
FB1503	B-4
FB1505	B-4
FB3303	F-4
FB3304	G-2
FB3307	C-3
FB3601	E-8
FB4501	F-7
FB4901	G-9
IC1301	C-8
IC1501	B-4
IC3101	F-5
IC3102	F-5
IC3301	D-4
IC3302	D-3
IC3303	F-2
IC3603	D-7
IC4501	F-6
IC4502	E-7
IC4801	E-8
IC4802	E-9
IC4803	B-6
IC4901	F-9
IC4902	F-8
IC5701	F-3
IC5702	E-1
L1310	A-8
L1501	B-4
L1551	A-4
L1552	A-4
L1553	A-5
L2202	C-4
L2209	C-4
L3102	G-5
L3303	E-6
L3304	C-6
L3307	G-2
L3601	C-7
L3602	C-7
L5701	E-2
Q1101	A-7
Q1102	A-7
Q1103	A-8
Q1301	A-9
Q1302	B-8
Q1303	A-8
Q1304	A-8
Q1305	B-7
Q1306	A-8
Q1307	B-8
Q1308	A-8
Q1309	A-7
Q1310	B-8
Q1311	B-9
Q1312	B-9
Q1313	B-9
Q1314	B-9
Q1317	C-8
Q1319	C-9
Q1552	A-5
Q1553	A-5
Q3102	F-4
Q3107	G-5
Q3109	G-4
Q3110	G-5
Q3112	F-4
Q3113	F-4
Q3114	F-5
Q3115	F-5
Q3302	D-6
Q3304	D-6
Q3305	D-6
Q3306	D-6
Q3307	D-6
Q3308	D-6
Q3602	C-7
Q3603	D-7
Q3604	C-6
Q3605	D-6
Q3606	D-7
Q4804	E-8
Q4806	E-9
Q4901	F-7
Q5701	G-3
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Q5704	G-2
Q5706	E-2
Q5708	E-2
Q5714	G-3
Q5715	G-3
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R1127	G-8
R1128	G-8
R1131	G-9
R1132	G-9
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R1147	A-8
R1301	C-8
R1302	C-8
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R1304	B-8
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R1307	C-8
R1309	C-8
R1310	C-7
R1311	C-7
R1312	C-8
R1313	C-7
R1314	C-8
R1316	B-9
R1317	B-9
R1318	B-9
R1319	B-9
R1320	B-9
R1321	B-9
R1322	B-9
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R1326	C-8
R1328	C-9
R1329	C-9
R1345	B-7
R1347	B-8
R1348	B-8
R1501	B-5
R1502	B-5
R1503	B-5
R1504	B-4
R1505	B-4
R1506	B-4
R1512	C-4
R1551	A-5
R1555	A-5
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R3104	F-4
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R3110	F-5
R3111	F-4
R3112	F-5
R3113	F-5
R3128	G-5
R3139	G-4
R3140	F-4
R3141	G-5
R3142	F-5
R3146	F-4
R3305	D-3
R3309	E-6
R3310	E-6
R3311	E-6
R3312	E-6
R3313	E-6
R3314	D-6
R3315	D-5
R3316	D-5
R3317	C-5
R3318	C-6
R3319	C-6
R3320	E-6
R3321	C-5
R3322	E-6
R3323	C-6
R3324	C-6
R3325	C-6
R3326	C-5
R3328	D-6
R3331	D-6
R3333	G-2
R3334	D-6
R3336	D-6
R3337	G-2
R3338	D-6
R3340	D-6
R3341	D-6
R3343	D-6
R3346	G-1
R3349	G-2
R3350	G-1
R3351	D-6
R3352	E-1
R3356	C-6
R3358	D-6
R3360	C-6
R3361	F-1
R3362	G-1
R3364	F-1
R3365	G-1
R3367	F-1
R3368	F-1
R3369	G-1
R3370	F-1
R3371	G-1
R3372	F-1
R3375	D-3
R3376	D-3
R3377	E-5
R3378	C-5
R3379	C-5
R3380	E-4
R3381	E-6
R3385	E-4
R3386	D-3
R3604	D-8
R3607	C-7
R3609	D-6
R3611	C-7
R3612	C-6
R3617	D-7
R3618	C-6
R3622	D-7
R3636	D-8
R3639	D-8
R3643	D-6
R3652	D-6
R3656	E-8
R3657	D-6
R3658	C-7
R3659	C-6
R3660	C-7
R4403	E-7
R4404	E-7
R4406	E-8
R4502	G-6
R4503	G-6
R4504	G-6
R4505	G-6
R4507	G-7
R4508	F-7
R4511	E-7
R4512	F-7
R4514	F-7
R4515	E-7
R4516	E-7
R4517	E-6
R4518	E-6
R4520	E-7
R4521	E-6
R4522	E-6
R4523	E-6
R4524	E-6
R4525	E-6
R4526	E-6
R4527	E-7
R4528	E-7
R4529	E-7
R4530	F-7
R4531	F-7
R4532	E-6
R4533	F-5
R4534	F-5
R4803	E-8
R4808	E-8
R4811	E-7
R4813	A-7
R4814	B-7
R4815	B-7
R4816	B-7
R4817	B-7
R4818	B-7
R4819	B-7
R4820	A-7
R4821	A-7
R4822	A-7
R4823	E-9
R4824	F-9
R4825	B-7
R4826	B-7
R4827	B-7
R4828	B-7
R4829	B-7
R4830	B-7
R4832	C-7
R4833	A-6
R4834	A-6
R4835	A-6
R4836	A-6
R4837	C-6
R4838	C-6
R4839	C-6
R4840	C-6
R4841	A-7
R4842	A-7
R4843	A-7
R4844	A-7
R4846	A-6
R4848	A-6
R4849	A-6
R4852	A-5
R4853	A-5
R4855	C-7
R4856	E-9
R4861	A-6
R4862	A-6
R4863	C-6
R4864	C-6
R4866	C-6
R4867	A-6
R4868	A-6
R4869	A-6
R4871	C-6
R4872	C-6
R4873	C-6
R4874	B-5
R4875	B-5
R4877	B-5
R4878	B-5
R4879	B-5
R4880	B-5
R4881	B-5
R4882	B-5
R4883	B-5
R4884	B-5
R4885	A-5
R4886	A-5
R4887	A-5
R4888	A-5
R4892	A-5
R4894	B-5
R4895	A-7
R4897	A-6
R4901	F-7
R4902	G-7
R4903	G-7
R4904	F-9
R4906	G-7
R4908	E-8
R4910	E-8
R4911	E-8
R4912	E-8
R4913	E-8
R4914	E-8
R4915	G-8
R4916	G-8
R4917	E-8
R4918	G-8
R4919	G-7
R4920	F-9
R4921	F-9
R4922	F-9
R4923	F-9
R4924	F-9
R4925	F-9
R4926	F-9
R4927	F-9
R4928	F-9
R4929	F-9
R4930	F-9
R4931	F-9
R4932	F-9
R4933	F-9
R4934	F-9
R4935	G-8
R4936	G-8
R4938	F-9
R4939	F-9
R4940	F-9
R4941	F-9
R4942	F-9
R4943	G-9
R4944	F-9
R5701	E-2
R5702	E-2
R5707	E-2
R5708	E-2
R5709	E-2
R5710	E-2
R5711	G-3
R5712	G-3
R5714	E-3
R5715	E-3
R5717	G-3
R5718	G-3
R5719	G-3
R5720	E-3
R5721	E-3
R5722	E-3
R5723	E-3
R5724	F-4
R5725	F-4
R5730	F-4
R5731	F-1
R5732	F-1
R5733	F-4
R5735	E-1
R5736	E-1
R5737	E-1
R5738	E-1
R5739	E-1
R5740	E-1
R5741	E-1
R5742	G-3
R5743	G-3
R5744	G-3
R5745	G-3
R5746	G-3
X1501	B-3
X3301	F-4
X4801	C-6
X4901	G-7

SE-104/113 BOARD
(SIDE A)

C201	D-2
C202	D-2
C203	D-2
C204	B-2
C207	G-2
C208	G-2
C209	F-2
C210	F-2
C211	F-2
C212	E-2
C214	F-2
C223	B-2
C225	A-2
C226	A-2
CN201	E-3
D212	A-2
IC201	F-2
J201	B-3
J202	D-3
R201	D-2
R202	D-2
R203	D-2
R204	D-2
R205	E-2
R206	G-3
R207	G-3
R208	F-3
R209	F-3
R211	F-3
R213	C-3
R214	C-2
R217	C-3
R224	A-2
R225	A-2
R226	B-2
SE201	D-2
SE202	C-2

SE-104/113 BOARD
(SIDE B)

C220	G-3
C221	G-3
CN202	F-2
D211	D-2
L201	G-2
R212	C-2
R215	C-3
R218	D-3
R219	D-2
R220	D-3
VDR001	D-3

MI-37 BOARD
(SIDE A)

C3905	A-3
C3906	A-3
C3908	A-3
C3910	A-3
C3912	B-3
C3913	B-3
C3914	B-3
C3917	B-3
C3918	B-3
C3921	B-2
C3923	B-2
C3924	A-3
C3926	A-3
C3927	A-2
C3929	A-3
C3935	A-3
C3936	A-2
C5806	A-1
C5807	A-1
C5808	B-1
C5809	B-1
C5813	A-1
C5814	B-1
C5815	B-1
C5816	B-1
C5817	A-1
C5819	B-1
C5820	A-1
C5822	A-1
C5823	B-1
C5824	A-1
C5825	B-1
C5826	A-2
C5827	B-1
C5829	B-1
C5830	A-2
C5832	A-2
C5833	A-2
C5835	B-1
C5836	B-1
C5838	A-2
C5839	B-2
C5840	A-2
C5841	A-2
D3900	B-3
D3901	B-1
IC3900	B-3
IC3901	A-3
IC5801	A-1
L3902	B-3
L3903	B-2
L3904	B-2
L5803	A-2
Q3901	B-1
Q3902	A-2
Q3903	A-2
R3900	B-3
R3912	B-3
R3913	B-3
R3916	A-3
R3919	A-3
R3920	A-3
R3921	A-3
R3922	A-2
R3923	A-2
R3924	A-3
R3936	A-2
R5801	B-1
R5802	B-1
R5803	B-1
R5804	A-2
R5807	A-1
R5809	A-1
R5814	B-1
R5815	A-1
R5816	B-1
R5817	A-1
R5818	B-1
R5819	A-1
R5820	A-2
R5821	B-1
R5822	B-1
R5823	A-2
R5824	A-2
R5825	B-1
R5826	B-1
R5827	A-2
R5828	B-1
R5829	A-2
R5831	A-2
R5834	A-2

MI-37 BOARD
(SIDE B)

C3900	B-3
C3901	A-3
C3902	A-3
C3904	A-3
C3907	B-2
C3909	B-3
C3911	B-3
C3915	A-3
C3916	A-3
C3919	A-3
C3920	A-3
C3922	A-2
C3925	A-3
C3928	B-3
C3931	B-2
C3933	B-2
C3934	A-3
C5810	A-1
C5812	A-1
CN5801	A-1
CN5802	A-2
CN5803	A-2
CN5804	B-3
D3903	B-3
D3904	B-2
D5806	A-1
D5807	B-1
F3900	B-2
L3900	B-3
L3901	B-3
R3901	B-2
R3902	B-2
R3903	B-3
R3904	B-3
R3905	A-3
R3906	B-2
R3908	B-3
R3909	A-3
R3910	A-2
R3911	A-3
R3917	A-3
R3918	A-3
R3938	B-2
R3939	B-2
R5805	A-1
R5806	A-1
R5835	A-1
R5836	A-1
R5837	A-1
R5840	A-1
R5841	A-1
R5845	A-2
VDR801	A-2
VDR803	A-1

CF-69 BOARD (SIDE A)	
CN003	E-1
CN008	B-1
D009	E-4
R001	D-6
R002	B-5
R003	C-6
R004	D-7
R005	E-3
R006	D-6
R007	B-5
R008	C-6
R009	D-7
R014	D-7
R015	D-6
R016	B-5
R017	C-6
R020	D-6
R021	A-6
R022	C-5
R023	D-7
R024	D-5
R025	B-6
R026	C-5
R027	C-7
R030	B-6
R031	D-4
R032	B-7
R038	B-6
R039	D-4
R040	A-7
R052	B-5
R053	B-5
R054	C-1
S001	C-6
S003	D-6
S005	C-5
S006	E-7
S007	D-6
S009	C-5
S010	D-5
S013	C-7
S014	D-4
S016	C-4
S017	C-7
S019	B-7
S020	A-7

CF-69 BOARD (SIDE B)	
BH001	B-3
C001	E-1
CN001	B-4
CN002	E-1
CN004	C-1
CN005	B-1
CN007	B-2
D001	E-1
D005	A-7
D006	A-7
D008	A-3
Q002	C-6
Q003	C-6
R010	C-6
R011	C-6
R012	C-6
R013	C-6
R019	C-6
R047	C-6
R048	A-3

CF-71 BOARD (SIDE A)	
BH001	C-6
BZ001	D-3
C005	D-5
CN006	B-5
D002	D-8
D004	D-6
D005	D-6
D007	E-6
IC002	D-5
R011	C-7
R012	C-8
R013	D-3
R016	C-8
R018	D-3
R019	D-6
R021	D-3
R022	C-8
R023	D-8
R024	D-2
R026	D-2
R027	D-2
R032	D-2
R033	C-1
R044	B-6
R045	B-6
R052	D-6
S001	C-4
S002	C-7
S003	D-6
S004	C-9
S005	B-8
S008	D-7
S009	C-6
S010	C-2
S011	C-1

CF-71 BOARD (SIDE B)	
CN001	B-5
CN005	C-4
CN008	E-2
D001	B-6
Q002	B-7
Q003	B-7
R001	B-7
R002	B-7
R003	B-7
R004	B-7
R005	C-6
R006	C-6
R007	C-6
R009	B-7
R010	C-7
R017	B-8
R020	A-8
R025	C-6
R046	C-6
S006	A-8
S007	B-8

PD-117 BOARD (SIDE A)	
C5504	B-4
C5505	D-5
C5506	D-5
C5507	D-5
C5515	B-4
C5516	B-4
C5520	C-5
C5521	C-3
C5522	C-3
C5523	A-4
C5524	C-4
C5528	C-4
C5530	B-5
C5531	A-5
C5603	C-2
C5607	A-1
CN5501	A-5
CN5502	C-5
CN5604	A-1
CN5701	D-2
CN5702	D-5
CN5703	D-1
CN5704	D-3
CN5705	D-3
D5502	B-4
FB5502	C-4
IC5502	B-4
IC5503	B-4
L5505	B-4
L5601	A-2
Q5502	C-4
Q5503	B-5
Q5504	B-5
Q5505	B-5
Q5506	B-5
R5512	B-4
R5513	B-4
R5516	C-5
R5517	B-5
R5521	B-5
R5553	B-5
R5559	B-4
R5562	B-5
R5563	B-5
R5564	B-5
R5565	B-5
R5566	A-5
R5567	B-5
R5568	C-3
R5569	C-5
R5702	C-5
T5601	B-1

PD-117 BOARD (SIDE B)	
C5501	D-4
C5503	D-5
C5508	B-4
C5509	C-4
C5510	C-5
C5511	C-4
C5512	C-4
C5513	C-5
C5514	B-4
C5517	B-5
C5518	B-5
C5519	B-4
C5527	C-5
C5529	B-4
C5602	C-2
C5604	B-2
C5605	A-2
C5606	A-2
C5608	C-2
C5704	C-3
D5503	B-4
D5601	A-2
D5602	A-1
FB5503	C-4
IC5501	C-4
IC5601	B-3
IC5602	A-2
IC5701	C-3
L5501	D-4
L5504	B-4
Q5501	B-4
Q5601	B-3
Q5602	B-2
Q5603	A-2
Q5604	A-2
R5501	D-5
R5503	D-4
R5504	B-4
R5505	C-5
R5506	C-4
R5507	C-4
R5508	C-4
R5509	C-4
R5510	C-4
R5511	C-4
R5514	B-5
R5515	A-5
R5518	B-5
R5519	A-4
R5520	A-4
R5522	A-5
R5523	B-5
R5524	B-5
R5525	B-5
R5551	B-4
R5557	D-4
R5560	B-4
R5608	B-3
R5609	B-3
R5610	B-2
R5611	A-2
R5612	A-2
R5613	B-2
R5614	B-3
R5616	A-2
R5617	A-2
R5618	A-2
R5704	A-5
R5706	B-5
R5707	D-5
R5708	D-5
R5711	D-3
R5712	C-3
R5714	D-3
S5701	A-5
S5702	B-5
S5703	C-5
S5704	D-5

SECTION 5
ADJUSTMENTS

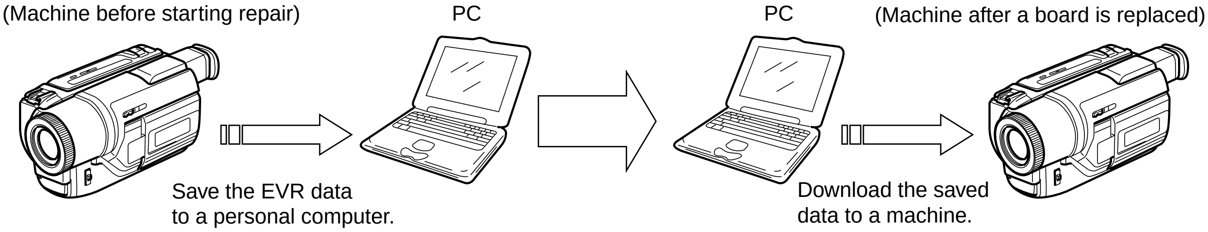
1. Before starting adjustment

EVR Data Re-writing Procedure When Replacing Board

The data that is stored in the repair board, is not necessarily correct.
Perform either procedure 1 or procedure 2 or procedure 3 when replacing board.

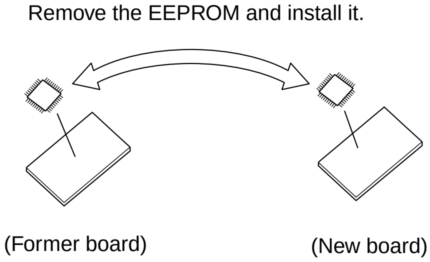
Procedure 1

Save the EVR data of the machine in which a board is going to be replaced. Download the saved data after a board is replaced.


(Machine before starting repair)
PC
PC
(Machine after a board is replaced)
Save the EVR data
to a personal computer.
Download the saved
data to a machine.

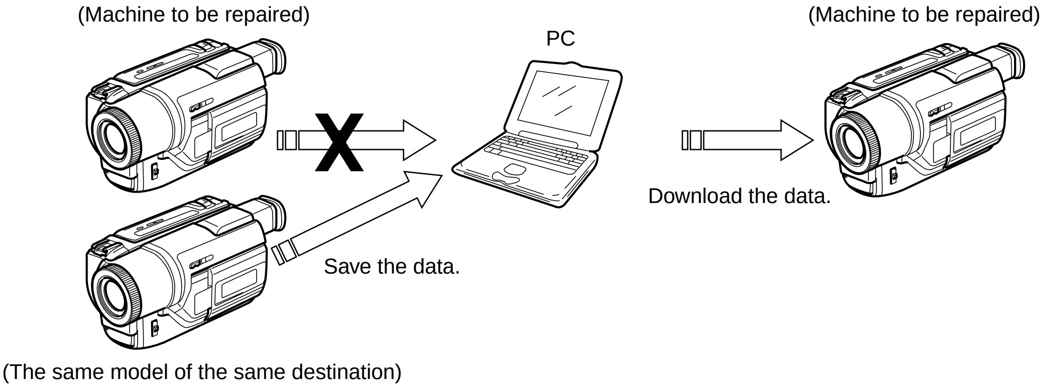
Procedure 2

Remove the EEPROM from the board of the machine that is going to be repaired. Install the removed EEPROM to the replaced board.


Remove the EEPROM and install it.
(Former board)
(New board)

Procedure 3

When the data cannot be saved due to defective EEPROM, or when the EEPROM cannot be removed or installed, save the data from the same model of the same destination, and download it.


(Machine to be repaired)
PC
(Machine to be repaired)
X
Download the data.
Save the data.
(The same model of the same destination)

After the EVR data is saved and downloaded, check the respective items of the EVR data.
(Refer to page 5-3 for the items to be checked)

1-1. Adjusting items when replacing main parts and boards

• Adjusting items when replacing main parts

When replacing main parts, adjust the items indicated by ● in the following table.

Adjustment Section	Adjustment	Replaced part																					
		Block replacement							Mounted part replacement														
		Lens device	Mechanism deck	B/W EVF block V901 (Picture tube)	LCD block LCD901 (LCD panel)	LCD block ND901 (Fluorescent tube)	Mechanism deck M901 (Drum assembly)	Mechanism deck M902 (Capstan motor)	CD-242/244/269 board IC101/151 (CCD imager)	SE-104/113 board SE201/202 (PITCH, YAW sensor)	VF-129 board IC901 (CRT driver)	VF-129 board T901 (FBT)	PD-117 board IC5501 (RGB driver)	PD-117 board IC5502 (Timing generator)	VC-235 board IC1502 (S/H, AGC, A/D CONV.)	VC-235 board IC3103 (REC/PB AMP)	VC-235 board IC3101 (EQ, A/D CONV., PLL)	VC-235 board IC1501 (Timing generator)	VC-235 board IC3701 (VIDEO IN/OUT)	VC-235 board IC3301 (VIDEO DSP, D/A CONV.)	VC-235 board IC2201 (Y/C process)	MI-37 board IC3901 (IR transmitter)	VC-235 board IC5701 (AUDIO IN/OUT)
Initialization of 7, 8, C, D, E, F page data	Initialization of 8, C, D page data																						
	Initialization of 7, E, F page data																						
Camera	HALL adj.	●																					
	Flange back adj.	●							●														
	Optical axis adj.	●							●														
	Color reproduction adj.								●						●								
	AWB & LV standard data input								●						●								
	Auto white balance adj.								●						●								
	Angular velocity sensor sensitivity data preset									●													
B/W EVF	Centering adj.			●							●	●											
	Focus adj.			●							●	●											
	Aberration adj.			●							●	●											
	Horizontal amplitude adj.			●							●	●											
	Vertical amplitude adj.			●							●	●											
	Brightness adj.			●							●	●											
LCD (Note 1)	LCD initial data input																						
	VCO adj.												●	●									
	RGB AMP adj.												●							●			
	Contrast adj.												●							●			
	COM AMP adj.												●										
	V-COM adj.				●								●										
	White balance adj.				●	●							●										
System control	Node unique ID No. input																						
	Battery end adj.																						
Servo, RF	Reel FG adj.		●																				
	Switching position adj.		●				●																
	AGC center level adj.															●	●						
	APC & AEQ adj.															●	●						
	PLL f_0 & LPF f_0 adj.															●	●						
	Hi8/Standard8 switching position adj.		●				●																
	CAP FG duty adj.		●					●															
Video	27MHz/36MHz origin oscillation adj.																	●					
	Chroma BPF f_0 adj.																		●				
	S VIDEO OUT Y level adj.																		●	●			
	S VIDEO OUT chroma level adj.																		●	●			
	Hi8/Standard8 AFC f_0 adj.																				●		
IR	IR video carrier frequency adj.																					●	
	IR video deviation adj.																					●	
	IR audio deviation adj.																					●	
Audio	Hi8/Standard8 AFM BPF f_0 adj.																						●
	Hi8/Standard8 AFM 1.5MHz deviation adj.																						●
	Hi8/Standard8 AFM 1.7MHz deviation adj.																						●
Mechanism	Tape path adj.		●				●	●															

Table 5-1-1(1)

• Adjusting items when replacing a board or EEPROM

When replacing a board or EEPROM, adjust the items indicated by ● in the following table.

Adjustment Section	Adjustment	Replaced part						
		Block replacement						
		SE-104/113 board (COMPLETE)	VF-129 board (COMPLETE)	PD-117 board (COMPLETE)	MI-37 board (COMPLETE)	VC-235 board (COMPLETE)	VC-235 board IC4502 (EEP ROM)	VC-235 board IC4901 (EEP ROM)
Initialization of 7, 8, C, D, E, F page data	Initialization of 8, C, D page data						●	
	Initialization of 7, E, F page data							●
Camera	HALL adj.					●		●
	Flange back adj.					●		●
	Optical axis adj.					●		●
	Color reproduction adj.					●		●
	AWB & LV standard data input					●		●
	Auto white balance adj.					●		●
	Angular velocity sensor sensitivity data preset	●				●		●
B/W EVF	Centering adj.		●					
	Focus adj.		●					
	Aberration adj.		●					
	Horizontal amplitude adj.		●					
	Vertical amplitude adj.		●					
	Brightness adj.		●					
LCD (Note 1)	LCD initial data input					●	●	
	VCO adj.			●		●	●	
	RGB AMP adj.			●		●	●	
	Contrast adj.			●		●	●	
	COM AMP adj.			●		●	●	
	V-COM adj.			●		●	●	
	White balance adj.			●		●	●	
System control	Node unique ID No. input					●	●	
	Battery end adj.					●	●	
Servo, RF	Reel FG adj.					●	●	
	Switching position adj.					●	●	
	AGC center level adj.						●	
	APC & AEQ adj.						●	
	PLL f_0 & LPF f_0 adj.						●	
	Hi8/Standard8 switching position adj.					●		●
	CAP FG duty adj.					●		●
Video	27MHz/36MHz origin oscillation adj.							●
	Chroma BPF f_0 adj.						●	
	S VIDEO OUT Y level adj.						●	
	S VIDEO OUT chroma level adj.						●	
	Hi8/Standard8 AFC f_0 adj.							●
IR	IR video carrier frequency adj.				●	●		●
	IR video deviation adj.				●	●		●
	IR audio deviation adj.				●	●		●
Audio	Hi8/Standard8 AFM BPF f_0 adj.							●
	Hi8/Standard8 AFM 1.5MHz deviation adj.							●
	Hi8/Standard8 AFM 1.7MHz deviation adj.							●
Mechanism	Tape path adj.							

Table 5-1-1(2)

Note 1: TRV model (DCR-TRV120/TRV120E/TRV120P/TRV125E) only.

Note 2: 720H model: DCR-TRV120/TRV120P
960H (TRV) model: DCR-TRV120E/TRV125E
960H (TR) model: DCR-TR8000E/TR8100E

	CD board
720H model	CD-242
960H (TRV) model	CD-244
960H (TR) model	CD-269

Note 3: TRV model: DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model: DCR-TR8000E/TR8100E

	SE board	PD board
TRV model	SE-104	PD-117
TR model	SE-113	—

5-1. CAMERA SECTION ADJUSTMENT

1-1. PREPARATIONS BEFORE ADJUSTMENT (CAMERA SECTION)

1-1-1. List of Service Tools

- Oscilloscope
- Regulated power supply
- Color monitor
- Digital voltmeter
- Vectorscope
- Frequency counter

Ref. No.	Name	Parts Code	Usage
J-1	Filter for color temperature correction (C14)	J-6080-058-A	Auto white balance adjustment/check White balance adjustment/check
J-2	ND filter 1.0	J-6080-808-A	White balance check
	ND filter 0.4	J-6080-806-A	White balance check
	ND filter 0.1	J-6080-807-A	White balance check
J-3	Pattern box PTB-450	J-6020-200-A	
J-4	Color chart for pattern box	J-6020-250-A	
J-5	Adjustment remote commander (RM-95 upgraded). (Note 1)	J-6082-053-B	
J-6	Siemens star chart	J-6080-875-A	For checking the flange back
J-7	Clear chart for pattern box	J-6080-621-A	
J-8	Multi CPC jig	J-6082-311-A	For adjusting the LCD block
J-9	CPC-13 jig	J-6082-443-A	For adjusting the video section
J-10	Power cord (Note 2)	J-6082-223-A	For connecting the battery terminal and DC power supply
J-11	Extension cable (16P, 0.5 mm)	J-6082-357-A	For extension between the CD-242 board (CN101) and the VC-235 board (CN1501)(720H model) For extension between the CD-244/269 board (CN151) and the VC-235 board (CN1501)(960H model)
J-12	IR receiver jig	J-6082-383-A	For adjusting the IR transmitter
J-13	Mini pattern box	J-6082-353-B	For adjusting the flange back
J-14	Camera table	J-6082-384-A	For adjusting the flange back

Note 1: If the micro processor IC in the adjustment remote commander is not the new micro processor (UPD7503G-C56-12), the pages cannot be switched. In this case, replace with the new micro processor (8-759-148-35).

Note 2: Connect the adjustment remote commander to the LANC jack, and set to HOLD switch to the “ADJ” side.

Note 3: 720H model: DCR-TRV120/TRV120P
960H model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

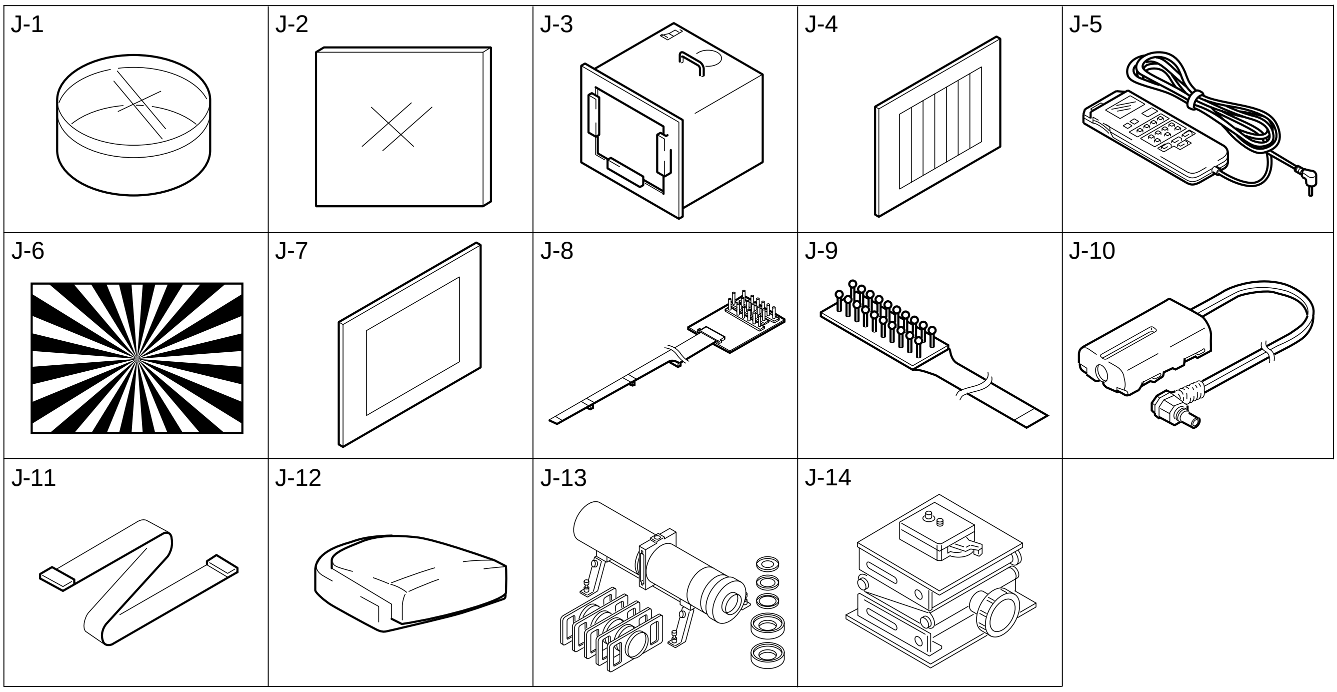


Fig. 5-1-1

1-1-2. Preparations

Note 1: For details of how remove the cabinet and boards, refer to "2. DISASSEMBLY".

Note 2: When performing only the adjustments, the lens block and boards need not be disassembled.

Note 3: TRV model: DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model: DCR-TR8000E/TR8100E

	CF board
TRV model	CF-69
TR model	CF-71

1) Connect the equipment for adjustments according to Fig. 5-1-3, 4.
2) The front panel block (MI-37 board, focus dial, microphone unit) must be assembled because the focus ring is used for adjustments.

Note 4: As removing the cabinet (R) (removing the VC-235 board CN1105) means removing the lithium 3V power supply (CF-69/71 board BH001), data such as date, time, user-set menus will be lost. After completing adjustments, reset these data. If the cabinet (R) has been removed, the self-diagnosis data, data on history of use (total drum rotation time, etc.) will be lost. Before removing, note down the self-diagnosis data and data on history use (data of page: 2, address: A2 to AA). (Refer to "SELF-DIAGNOSIS FUNCTION" for the self-diagnosis data, and to "5-4. Service Mode" for the data on the history use.)

Note 5: Setting the "Forced Camera Power ON" Mode
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 01, and press the PAUSE button of the adjustment remote commander. The above procedure will enable the camera power to be turned on with the power switch (SS-10000 block) removed. After completing adjustments, be sure to exit the "Forced Camera Power ON Mode".

Note 6: Exiting the "Forced Camera Power ON" Mode
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjustment remote commander.
3) Select page: 0, address: 01, and set data: 00.

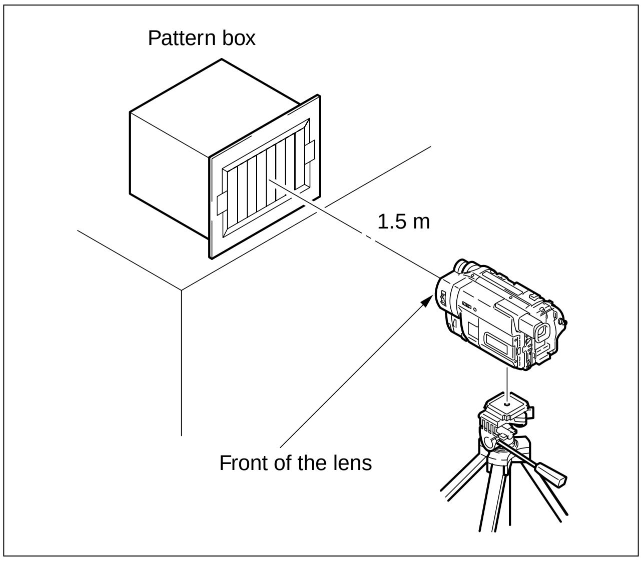


Fig. 5-1-2

TR model

Note 1: Press the battery switch of the battery terminal using adhesive tape, etc.

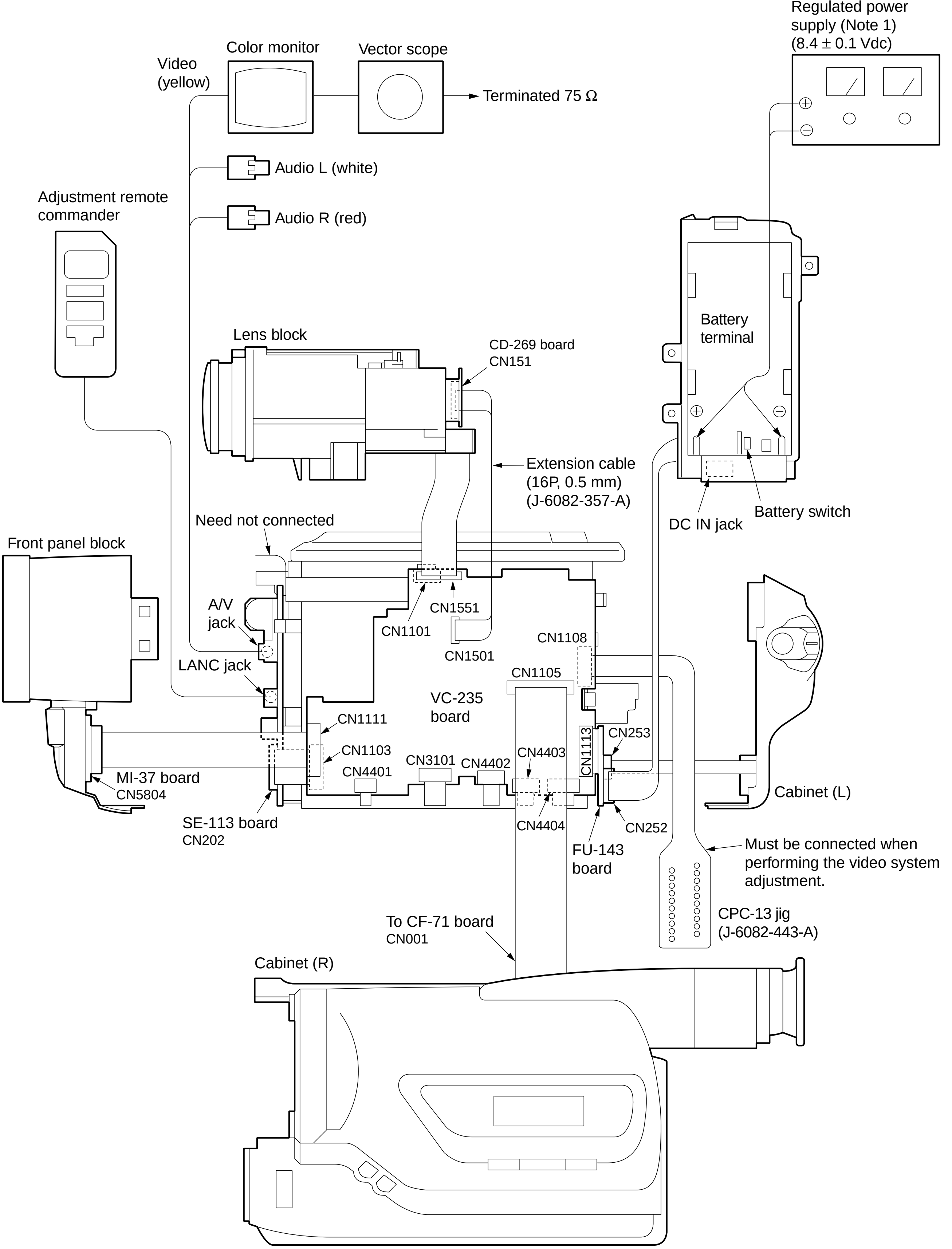
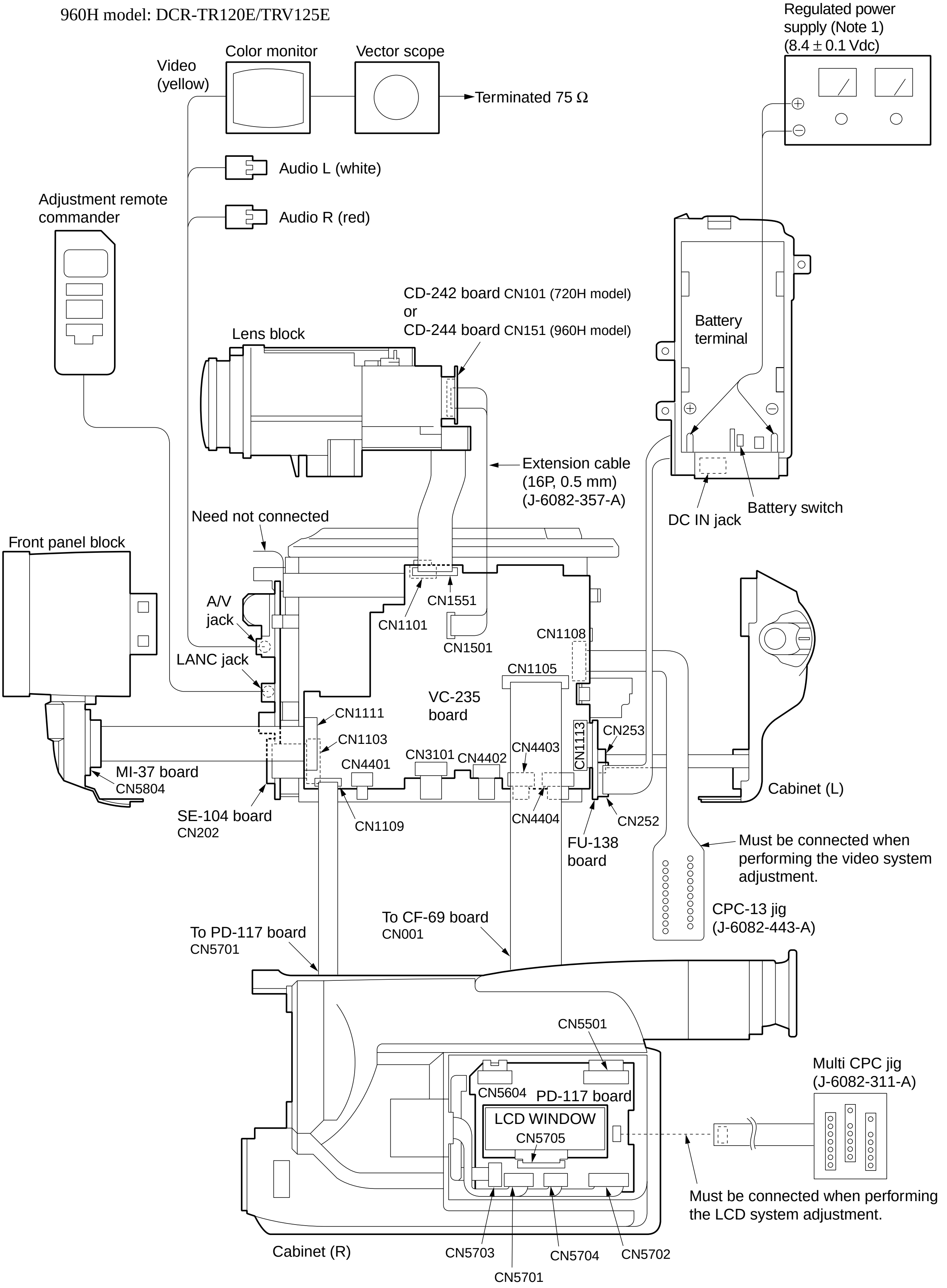

Regulated power supply (Note 1) (8.4 ± 0.1 Vdc)
Color monitor
Vector scope
Video (yellow)
Terminated 75 Ω
Audio L (white)
Audio R (red)
Adjustment remote commander
Lens block
CD-269 board CN151
Battery terminal
Extension cable (16P, 0.5 mm) (J-6082-357-A)
Need not connected
Front panel block
DC IN jack
Battery switch
A/V jack
CN1551
CN1101
CN1501
CN1108
LANC jack
CN1105
VC-235 board
CN1111
CN253
CN1113
CN1103
CN3101
CN4402
CN4403
CN4401
MI-37 board
CN5804
Cabinet (L)
SE-113 board
CN202
CN4404
CN252
FU-143 board
Must be connected when performing the video system adjustment.
CPC-13 jig (J-6082-443-A)
To CF-71 board
CN001
Cabinet (R)

Fig. 5-1-3

TRV model

Note 1: Press the battery switch of the battery terminal using adhesive tape, etc.

Note 2: 720H model: DCR-TRV120/TRV120P
960H model: DCR-TR120E/TRV125E



Regulated power supply (Note 1) (8.4 ± 0.1 Vdc)
Video (yellow)
Color monitor
Vector scope
Terminated 75 Ω
Audio L (white)
Audio R (red)
Adjustment remote commander
CD-242 board CN101 (720H model)
or
CD-244 board CN151 (960H model)
Lens block
Battery terminal
Extension cable (16P, 0.5 mm) (J-6082-357-A)
Need not connected
DC IN jack
Battery switch
Front panel block
A/V jack
LANC jack
CN1551
CN1101
CN1501
CN1108
CN1105
VC-235 board
CN1111
CN1103
CN4401
CN3101
CN4402
CN4403
CN1113
CN253
MI-37 board
CN5804
SE-104 board
CN202
CN1109
CN4404
CN252
FU-138 board
Cabinet (L)
Must be connected when performing the video system adjustment.
CPC-13 jig (J-6082-443-A)
To PD-117 board
CN5701
To CF-69 board
CN001
CN5501
Multi CPC jig (J-6082-311-A)
CN5604
PD-117 board
LCD WINDOW
CN5705
Must be connected when performing the LCD system adjustment.
Cabinet (R)
CN5703
CN5701
CN5704
CN5702

Fig. 5-1-4

1-1-3. Precaution

1. Setting the Switch

Unless otherwise specified, set the switches as follows and perform adjustments without loading cassette.

Note: TRV model: DCR-TRV120/TRV120E/TRV120P/TRV125E

1.	POWER switch (SS-10000 block)	CAMERA
2.	NIGHT SHOT switch (Lens block)	OFF
3.	DEMO MODE (Menu display)	OFF
4.	DIGITAL ZOOM (Menu display)	OFF
5.	STEADY SHOT (Menu display)	OFF
6.	DISPLAY (Menu display) (TRV model)	V-OUT/LCD
7.	DISPLAY (CF-69 board) (TRV model)	ON
8.	FOCUS switch (MF-10000)	MANUAL
9.	PROGRAM AE (CF-69/71 board)	Auto
10.	BACK LIGHT (CF-69/71 board)	OFF
11.	PICTURE EFFECT (CF69/71 board)	OFF
12.	DIGITAL EFFECT (CF-69/71 board)	OFF
13.	16 : 9 WIDE (MENU display)	OFF

2. Order of Adjustments

Basically carry out adjustments in the order given.

Color bar chart (Color reproduction adjustment frame)

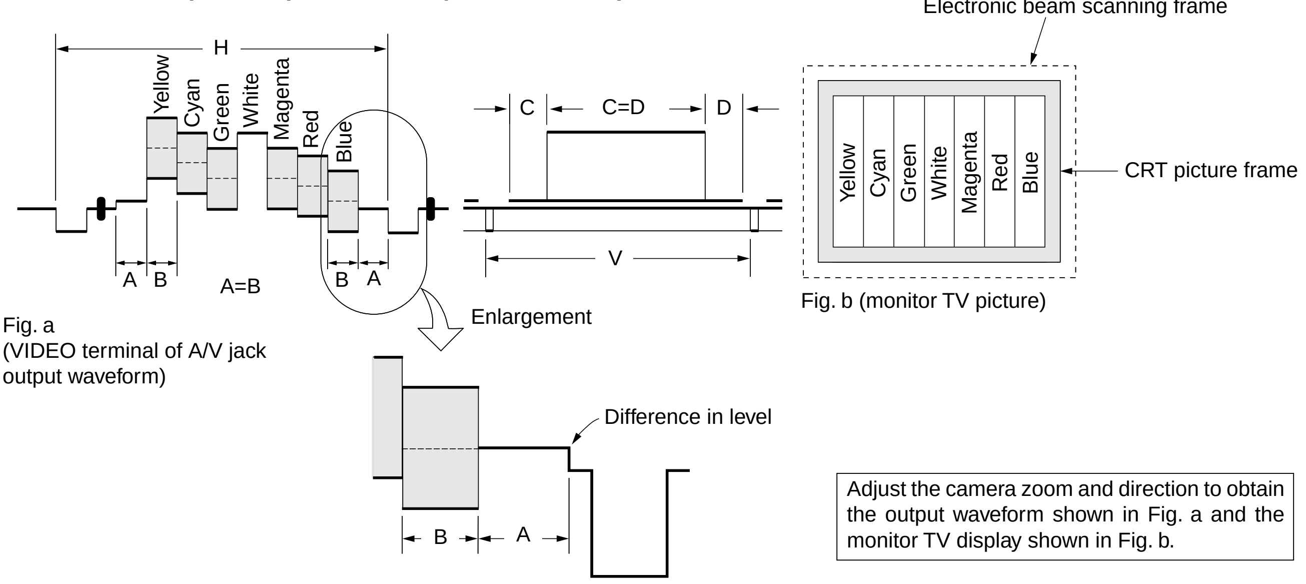

H
Yellow
Cyan
Green
White
Magenta
Red
Blue
A
B
A=B
B
A
C
C=D
D
V
Electronic beam scanning frame
Yellow
Cyan
Green
White
Magenta
Red
Blue
CRT picture frame
Enlargement
Difference in level
B
A

Fig. a
(VIDEO terminal of A/V jack output waveform)

Fig. b (monitor TV picture)

Adjust the camera zoom and direction to obtain the output waveform shown in Fig. a and the monitor TV display shown in Fig. b.

Fig. 5-1-5

3. Subjects

1) Color bar chart (Color reproduction adjustment frame)
   When performing adjustments using the color bar chart, adjust the picture frame as shown in Fig. 5-1-5. (Color reproduction adjustment frame)
2) Clear chart (Color reproduction adjustment frame)
   Remove the color bar chart from the pattern box and insert a clear chart in its place. (Do not perform zoom operations during this time)
3) Chart for flange back adjustment
   Join together a piece of white A0 size paper (1189mm × 841 mm) and a piece of black paper to make the chart shown in Fig. 5-1-6.

Note: Use a non-reflecting and non-glazing vellum paper. The size must be A0 or larger and the joint between the white and black paper must not have any undulations.

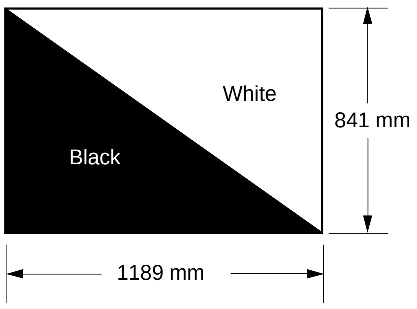

White
Black
841 mm
1189 mm

Fig. 5-1-6

1-2. INITIALIZATION OF 7, 8, C, D, E, F PAGE DATA

1-2-1. INITIALIZATION OF 8, C, D PAGE DATA

1. Initializing the 8, C, D Page Data

Note1: If "Initialization of Pages 8, C, D" is executed, all data on pages 8, C and D are initialized. (Only an individual page cannot be initialized)

Note2: If the 8, C, D page data has been initialized, "Modification of 8, C, D Page Data" and following adjustments need to be performed again.

1) LCD system adjustment
2) System control system adjustment
3) Servo and RF system adjustment
4) "Chroma BPF f_0 adjustment", "S VIDEO OUT Y level adjustment" and "S VIDEO OUT chroma level adjustment" of the video system adjustments.

Adjusting Page	8
Adjusting Address	00 to FF
Adjusting Page	C
Adjusting Address	10 to FF
Adjusting Page	D
Adjusting Address	10 to FF

Initializing Method:

1) Select page: 0, address: 01, and set data: 80.
2) Select page: 3, address: 81, set data: 10, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 80, set data: 0A, and press the PAUSE button of the adjustment remote commander.
4) Select page: 3, address: 80, and check that the data changes to "1A".
5) Select page: D, address: 2D, set data: 00, and press the PAUSE button of the adjustment remote commander.
6) Select page: 0, address: 01, and set data: 00.
7) Perform "Modification of 8, C, D Page Data".

2. Modification of 8, C, D Page Data

If the 8, C, D page data has been initialized, change the data of the "Fixed data-2" address shown in the following table by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
   Note : If copy the data built in the different model, the camcorder may not operate.
3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of D Page data

1) Select page: 2, address: 00, and set data: 29.
2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.
3) Select page: 0, address: 01, and set data: 00.

3. 8 Page Table

Note1: Fixed data-1: Initialized data. (Refer to "1. Initializing the 8, C, D Page Data")

Note2: Fixed data-2: Modified data. (Refer to "2. Modified of 8, C, D Page Data")

Address	Initial value		Remark
	NTSC	PAL	
00 to 98			Fixed data-1 (Initialized data)
99			Fixed data-2
9A to A2			Fixed data-1 (Initialized data)
A3			Fixed data-2
A4 to FF			Fixed data-1 (Initialized data)

4. C Page Table

Note1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 8, C, D Page Data”)

Note2: Fixed data-2: Modified data. (Refer to “2. Modified of 8, C, D Page Data”)

Address	Initial value		Remark
	NTSC	PAL	
00 to 0F			
10	EE	EE	Switching position adj.
11	00	00	
12	00	00	
13	00	00	
14 to 16			Fixed data-1 (Initialized data)
17	E0	E0	Reel FG adj.
18	25	25	APC & AEQ adj.
19	25	25	
1A			Fixed data-1 (Initialized data)
1B	25	25	APC & AEQ adj.
1C	25	25	
1D			Fixed data-1 (Initialized data)
1E	25	25	AGC center level adj.
1F	3E	3E	PLL f_0 & LPF f_0 adj.
20	3E	3E	
21	CA	CA	APC & AEQ adj.
22	99	99	PLL f_0 & LPF f_0 adj.
23, 24			Fixed data-1 (Initialized data)
25	88	88	S VIDEO OUT Y level adj.
26	E3	E3	S VIDEO OUT chroma level adj.
27	A1	A1	
28	04	04	Chroma BPF f_0 adj.
29	20	20	PLL f_0 & LPF f_0 adj.
2A, 2B			Fixed data-1 (Initialized data)
2C	03	03	APC & AEQ adj.
2D, 2E			Fixed data-1 (Initialized data)
2F			Fixed data-2
30	E0	E0	Reel FG adj.
31 to 85			Fixed data-1 (Initialized data)
86			Fixed data-2
87, 88			Fixed data-1 (Initialized data)
89			Fixed data-2
8A to 91			Fixed data-1 (Initialized data)
92			Fixed data-2
93 to 99			Fixed data-1 (Initialized data)
9A			Fixed data-2
9B to A4			Fixed data-1 (Initialized data)
A5			Fixed data-2
A6			
A7 to D5			Fixed data-1 (Initialized data)
D6			Fixed data-2
D7			
D8			
D9			
DA			
DB			
DC			
DD			
DE			
DF			
E0			
E1 to E5			Fixed data-1 (Initialized data)
E6			Fixed data-2
E7			Fixed data-1 (Initialized data)
E8	08	08	Node unique ID No. input
E9	00	00	
EA	46	46	
EB	01	01	
EC	01	01	
ED	00	00	
EE	00	00	
EF	00	00	
F0 to F3			Fixed data-1 (Initialized data)
F4	00	00	Emergency memory address
F5	00	00	
F6	00	00	
F7	00	00	
F8	00	00	
F9	00	00	
FA	00	00	
FB	00	00	
FC	00	00	
FD	00	00	
FE	00	00	
FF	00	00	

5. D Page Table

Note1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 8, C, D Page Data”)

Note2: Fixed data-2: Modified data. (Refer to “2. Modified of 8, C, D Page Data”)

Address	Initial value		Remark
	NTSC	PAL	
00 to 0F			
10	00	00	Test mode
11, 12			Fixed data-1 (Initialized data)
13			Fixed data-2
14			
15 to 1A			Fixed data-1 (Initialized data)
1B			Fixed data-2
1C			Fixed data-1 (Initialized data)
1D			Fixed data-2
1E, 1F			Fixed data-1 (Initialized data)
20			Fixed data-2
21, 22			Fixed data-1 (Initialized data)
23			Fixed data-2
24 to 26			Fixed data-1 (Initialized data)
27			Fixed data-2
28 to 2B			Fixed data-1 (Initialized data)
2C			Fixed data-2
2D			
2E to 42			Fixed data-1 (Initialized data)
43			Fixed data-2
44			
45			
46, 47			Fixed data-1 (Initialized data)
48	90	90	Battery end adj.
49	98	98	
4A to 4C			Fixed data-1 (Initialized data)
4D			Fixed data-2
4E to 50			Fixed data-1 (Initialized data)
51			Fixed data-2
52			Fixed data-1 (Initialized data)
53			Fixed data-2
54 to 57			Fixed data-1 (Initialized data)
58			Fixed data-2
59			Fixed data-1 (Initialized data)
5A			Fixed data-2
5B			
5C			
5D to 65			Fixed data-1 (Initialized data)
66			Fixed data-2
67			
68			
69			
6A to 83			Fixed data-1 (Initialized data)
84			Fixed data-2
85, 86			Fixed data-1 (Initialized data)
87			Fixed data-2
88 to 8D			Fixed data-1 (Initialized data)
8E			Fixed data-2
8F			
90 to A1			Fixed data-1 (Initialized data)
A2	80	80	VCO adj.
A3	–	70	Fixed data-1 (NTSC model) / VCO adj. (PAL model)
A4	80	80	V-COM adj.
A5	30	30/20	RGB AMP adj. (Note 3)
A6			Fixed data-1 (Initialized data)
A7	C0	C0/80	COM AMP adj. (Note 3)
A8	80	80	White balance adj.
A9	80	80	
AA	50	50/30	Contrast adj. (Note 3)
AB			Fixed data-1 (Initialized data)
AC			Fixed data-2
AD			
AE to B3			Fixed data-1 (Initialized data)
B4			Fixed data-2
B5			
B6			
B7, B8			Fixed data-1 (Initialized data)
B9			Fixed data-2
BA			
BB to C3			Fixed data-1 (Initialized data)
C4			Fixed data-2
C5			Fixed data-1 (Initialized data)
C6			Fixed data-2
C7 to FF			Fixed data-1 (Initialized data)

Note 3: TYPE S 123 k/ TYPE C
TYPE S 123 k model: DCR-TRV120E: AEP, UK, EE, NE, RU/TRV125E
TYPE C model: DCR-TRV120E: E, HK, AUS, CN, JE

1-2-2. INITIALIZATION OF 7, E, F PAGE DATA

1. Initializing the 7, E, F Page Data

Note1: If “Initialization of Pages 7, E, F” is executed, all data on pages 7, E and F are initialized. (Only an individual page cannot be initialized)

Note2: If the 7, E, F page data has been initialized, “Modification of 7, E, F Page Data” and following adjustments need to be performed again.

1) Camera system adjustments
2) “Hi8/standard 8 mm switching position adjustment” and “CAP FG duty adjustment” of the servo & RF system adjustments
3) “27 MHz/36 MHz origin oscillation adjustment” and “Hi8/standard 8 mm AFC f_0 adjustment” of the video system adjustment
4) IR transmitter adjustments
5) Audio system adjustments

Adjusting Page	7
Adjusting Address	00 to FF
Adjusting Page	E
Adjusting Address	00 to FF
Adjusting Page	F
Adjusting Address	10 to FF

Initializing Method:

1) Select page: 0, address: 01, and set data: 80.
2) Select page: 6, address: 00, and set data: 55 (NTSC) or data: 51 (PAL).
3) Select page: 6, address: 01, set data: 55 (NTSC) or data: 51 (PAL), and press the PAUSE button of the adjustment remote commander.
4) Select page: 6, address: 02, and check that the data is “01”.
5) Select page: 0, address: 01, and set data: 00.
6) Perform “Modification of 7, E, F Page Data”.

2. Modification of 7, E, F Page Data

If the 7, E, F page data has been initialized, change the data of the “Fixed data-2” address shown in the following tables by manual input.

Modifying Method:

1) Before changing the data, select page: 0, address: 01, and set data: 01.
2) New data for changing are not shown in the tables because they are different in destination. When changing the data, copy the data built in the same model.
   Note : If copy the data built in the different model, the camcorder may not operate.
3) When changing the data, press the PAUSE button of the adjustment remote commander each time when setting new data to write the data in the non-volatile memory.
4) Check that the data of adjustment addresses is the initial value. If not, change the data to the initial value.

Processing after Completing Modification of 7, E, F Page data

1) Select page: 2, address: 00, and set data: 29.
2) Select page: 2, address: 01, and set data: 29, and press the PAUSE button of the adjustment remote commander.
3) Select page: 0, address: 01, and set data: 00.

3. 7 Page Table

Note1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 7, E, F Page Data”)

Note2: Fixed data-2: Modified data. (Refer to “2. Modified of 7, E, F Page Data”)

Address	Initial value		Remark
	NTSC	PAL	
00 to 05			Fixed data-1 (Initialized data)
06			Fixed data-2
07			
08 to FF			Fixed data-1 (Initialized data)

4. E Page Table

Note1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 7, E, F Page Data”)

Note2: Fixed data-2: Modified data. (Refer to “2. Modified of 7, E, F Page Data”)

Address	Initial value		Remark
	NTSC	PAL	
00, 01			Fixed data-1 (Initialized data)
02			Fixed data-2
03			
04			
05			
06, 07			Fixed data-1 (Initialized data)
08			Fixed data-2
09 to 0D			Fixed data-1 (Initialized data)
0E			Fixed data-2
0F			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
1A to 27			Fixed data-1 (Initialized data)
28			Fixed data-2
29 to 33			Fixed data-1 (Initialized data)
34			Fixed data-2
35			Fixed data-1 (Initialized data)
36			Fixed data-2
37			Fixed data-1 (Initialized data)
38			Fixed data-2
39			
3A to 3C			Fixed data-1 (Initialized data)
3D			Fixed data-2
3E to 42			Fixed data-1 (Initialized data)
43			Fixed data-2
44			Fixed data-1 (Initialized data)
45			Fixed data-2
46			
47			
48			
49 to 50			Fixed data-1 (Initialized data)
51			Fixed data-2
52 to 56			Fixed data-1 (Initialized data)
57			Fixed data-2
58 to 5B			Fixed data-1 (Initialized data)
5C			Fixed data-2
5D			
5E			
5F to 71			Fixed data-1 (Initialized data)
72			Fixed data-2
73 to 7B			Fixed data-1 (Initialized data)
7C			Fixed data-2
7D			
7E			
7F			Fixed data-1 (Initialized data)
80			Fixed data-2
81			
82 to 8B			Fixed data-1 (Initialized data)
8C			Fixed data-2
8D			
8E			
8F			Fixed data-1 (Initialized data)
90			Fixed data-2
91 to 93			Fixed data-1 (Initialized data)
94			Fixed data-2
95 to FF			Fixed data-1 (Initialized data)

5. F Page Table

Note1: Fixed data-1: Initialized data. (Refer to “1. Initializing the 7, E, F Page Data”)

Note2: Fixed data-2: Modified data. (Refer to “2. Modified of 7, E, F Page Data”)

Address	Initial value		Remark
	NTSC	PAL	
00 to 0F			
10	00	00	Emergency memory address
11	00	00	
12	00	00	
13	00	00	
14	00	00	
15	00	00	
16	00	00	
17	00	00	
18	00	00	
19	00	00	
1A	00	00	
1B	00	00	
1C			Fixed data-2
1D to 23			Fixed data-1 (Initialized data)
24			Fixed data-2
25			Fixed data-1 (Initialized data)
26			Fixed data-2
27 to 2B			Fixed data-1 (Initialized data)
2C			Fixed data-2
2D			Fixed data-1 (Initialized data)
2E			Fixed data-2
2F to 32			Fixed data-1 (Initialized data)
33			Fixed data-2
34 to 37			Fixed data-1 (Initialized data)
38	68	68	HALL adj.
39	80	80	
3A	8D	8D	
3B			Fixed data-2
3C	80	80	AWB & LV standard data input
3D	7A	7A	
3E	2B	2B	
3F	80	80	
40	65	65	
41	80	80	
42	8D	8D	Auto white balance adj.
43	87	87	
44 to 46			Fixed data-1 (Initialized data)
47	33	33	Color reproduction adj.
48			Fixed data-1 (Initialized data)
49	34	34	Color reproduction adj.
4A to 4C			Fixed data-1 (Initialized data)
4D	8C	8C	27 MHz/36 MHz origin oscillation adj.
4E	2E	2E	Flange back adj.
4F	12	12	
50	48	48	
51	F1	F1	
52	18	18	
53	5D	5D	
54	66	66	
55	00	00	Flange back adj.
56	19	19	
57	00	00	
58	19	19	
59	00	00	
5A	00	00	
5B	04	04	
5C	00	00	
5D	00	00	
5E	69	9C	Angular velocity sensor sensitivity data preset
5F	63	A0	
60	00	00	Optical axis adj.
61	00	00	Flange back adj.
62	0A	0A	Hi8/Standard8 switching position adj.
63	00	00	
64	83	83	CAP FG duty adj.
65	40	40	Hi8/Standard8 AFC f_0 adj.
66			Fixed data-1 (Initialized data)
67			Fixed data-2
68 to 7A			Fixed data-1 (Initialized data)
7B	A6	A6	Hi8/Standard8 AFM 1.5 MHz deviation adj.
7C	94	94	Hi8/Standard8 AFM 1.7 MHz deviation adj.
7D	80	80	Hi8/Standard8 AFM BPF f_0 adj.
7E	41	41	IR video deviation adj.
7F	33	33	IR audio deviation adj.
80	C7	C7	IR video carrier frequency adj.
81 to 8A			Fixed data-1 (Initialized data)
8B			Fixed data-2
8C to 93			Fixed data-1 (Initialized data)
94			Fixed data-2
95 to 97			Fixed data-1 (Initialized data)
98			Fixed data-2
99 to 9B			Fixed data-1 (Initialized data)
9C			Fixed data-2
9D to 9F			Fixed data-1 (Initialized data)
A0			Fixed data-2
A1 to AA			Fixed data-1 (Initialized data)
AB			Fixed data-2
AC to CA			Fixed data-1 (Initialized data)
CB			Fixed data-2
CC			
CD			
CE			Fixed data-1 (Initialized data)
CF			Fixed data-2
D0 to D2			Fixed data-1 (Initialized data)
D3			Fixed data-2
D4 to D6			Fixed data-1 (Initialized data)
D7	FD	FC	Color reproduction adj.
D8	F4	F2	
D9 to DE			Fixed data-1 (Initialized data)
DF			Fixed data-2

Address	Initial value		Remark
	NTSC	PAL	
E0			Fixed data-1 (Initialized data)
E1			Fixed data-2
E2 to F2			Fixed data-1 (Initialized data)
F3			Fixed data-2
F4, F5			Fixed data-1 (Initialized data)
F6			Fixed data-2
F7 to FF			Fixed data-1 (Initialized data)

1-3. CAMERA SYSTEM ADJUSTMENTS

Before perform the camera system adjustments, Check that the specified values of “27 MHz/36 MHz Origin Oscillation Adjustment”, “S VIDEO OUT Y level Adjustment” and “S VIDEO OUT C level Adjustment” of “VIDEO SYSTEM ADJUSTMENT” are satisfied.

1. HALL Adjustment

For detecting the position of the lens iris, adjust the hall AMP gain and offset.

Subject	Not required
Measurement Point	Display data of page 1
Measuring Instrument	Adjustment remote commander
Adjustment Page	F
Adjustment Address	38, 39, 3A
Specified Value	88 to 8C during IRIS OPEN 15 to 19 during IRIS CLOSE

Note: Displayed data of page 1 of the adjustment remote commander.

1 : 00 : XX

Display data

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 6, address: 94, and set data: 8A.
3) Select page: 6, address: 95, and set data: 17.
4) Select page: 6, address: 01, set data: 6D, and press the PAUSE button of the adjustment remote commander. (The HALL adjustment is performed and the adjustment data is stored in page: F, address: 38, 39 and 3A.)
5) Select page: 6, address: 02, and check that the data is “01”.
6) Select page: 6, address: 01, set data: 00, and press the PAUSE button.

Checking method:

1) Select page: 0, address: 03, and set data: 03.
2) Select page: 6, address: 01, set data: 01, and press the PAUSE button.
3) Select page: 1, and check that the display data (Note) during IRIS OPEN satisfies the specified value.
4) Select page: 6, address: 01, set data: 03, and press the PAUSE button.
5) Select page: 1, and check that the display data during IRIS CLOSE satisfies the specified value.

Processing after Completing Adjustments

1) Select page: 6, address: 94, and set data: 00.
2) Select page: 6, address: 95, and set data: 00.
3) Select page: 0, address: 03, and set data: 00.
4) Select page: 0, address: 01, and set data: 00.
5) Select page: 6, address: 01, set data: 00, and press the PAUSE button.

2. Flange Back Adjustment (Using the minipattern box)

The inner focus lens flange back adjustment is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

Subject	Siemens star chart with ND filter for the minipattern box (Note 1)
Measurement Point	Check operation on TV monitor
Measuring Instrument	
Adjustment Page	F
Adjustment Address	4E to 5D, 61

Note 1: Dark Siemens star chart.
Note 2: Perform this adjustment after performing "HALL adjustment".

Switch setting:
1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

Preparation for adjustment

The minipattern box is installed as shown in the following figure.

Note: The attachment lenses are not used.

Specified voltage: The specified voltage varies according to the minipattern box, so adjust the power supply output voltage to the specified voltage written on the sheet which is supplied with the minipattern box.

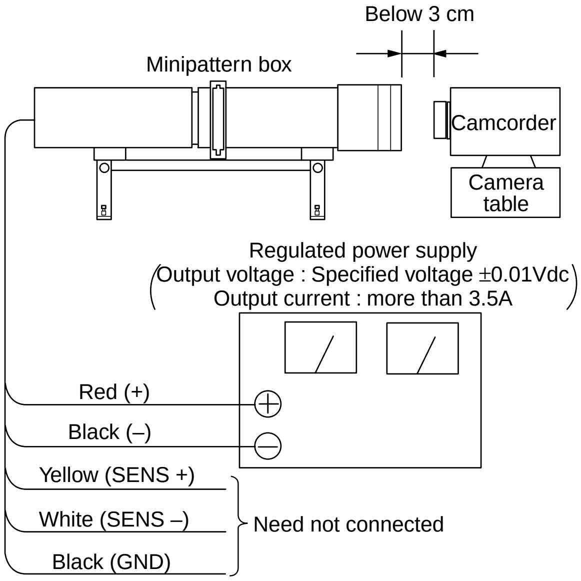


Fig. 5-1-7

Adjusting method:
1) Install the minipattern box so that the distance between it and the front of the lens of the camcorder is less than 3 cm.
2) Make the height of the minipattern box and the camcorder equal.
3) Check that the output voltage of the regulated power supply is the specified voltage ± 0.01 Vdc.
4) Check that at both the zoom lens TELE end and WIDE end, the center of the Siemens star chart and center of the exposure screen coincide.
5) Select page: 0, address: 01, and set data: 01.
6) Select page: 6, address: 82, and set data: 01.
7) Check that the data of page: F, address: 4E to 5D and 61 is the initial value (See table below).

Address	Data	Address	Data
4E	2E	57	00
4F	12	58	19
50	48	59	00
51	F1	5A	00
52	18	5B	04
53	5D	5C	00
54	66	5D	00
55	00	61	00
56	19		

8) Select page: 6, address: 02, and check that the data is "00".
9) Select page: 6, address: 01, set data: 13, and press the PAUSE button of the adjustment remote commander.
10) Select page: 6, address: 01, set data: 27, and press the PAUSE button.
(The adjustment data will be automatically input to page: F, addresses: 4E to 5D and 61)
11) Select page: 6, address: 02, and check that the data is "01".

Processing after Completing Adjustments
1) Turn OFF the main power supply (8.4 V).
2) Perform "Flange Back Check".

3. Flange Back Adjustment (Using Flange Back Adjustment Chart Subject More Than 500 m Away)

The inner focus lens flange back adjustment is carried out automatically. In whichever case, the focus will be deviated during auto focusing/manual focusing.

3-1. Flange Back Adjustment (1)

Subject	Flange back adjustment chart (2.0 m from the front of the lens) (Luminance: 350 ± 50 lux)
Measurement Point	Check operation on TV monitor
Measuring Instrument	
Adjustment Page	F
Adjustment Address	4E to 5D, 61

Note : Perform this adjustment after performing “HALL adjustment”.

Switch setting:

1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

Adjusting method:

1) Check that at both the zoom lens TELE end and WIDE end, the center of the chart for the flange back adjustment and center of the exposure screen coincide.
2) Select page: 0, address: 01, and set data: 01.
3) Select page: 6, address: 82, and set data: 01.
4) Check that the data of page: F, address: 4E to 5D, 61 is the initial value (See table below).

Address	Data	Address	Data
4E	2E	57	00
4F	12	58	19
50	48	59	00
51	F1	5A	00
52	18	5B	04
53	5D	5C	00
54	66	5D	00
55	00	61	00
56	19		

5) Select page: 6, address: 02, and check that the data is “00”.
6) Select page: 6, address: 01, set data: 13, and press the PAUSE button of the adjustment remote commander.
7) Select page: 6, address: 01, set data: 15, and press the PAUSE button.
(The adjustment data will be automatically input to page: F, addresses:4E to 5D, 61)
8) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments

1) Turn OFF the main power supply (8.4 V).
2) Perform “Flange Back Adjustment (2)”.

3-2. Flange Back Adjustment (2)

Perform this adjustment after performing “Flange Back Adjustment (1)”.

Subject	Subject more than 500m away (Subjects with clear contrast such as buildings, etc.)
Measurement Point	Check operation on TV monitor
Measuring Instrument	
Adjustment Page	F
Adjustment Address	4E to 5D, 61

Switch setting:

1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

Adjusting method:

1) Set the zoom lens to the TELE end and expose a subject that is more than 500 m away (subject with clear contrast such as building, etc.). (Nearby subjects less than 500 m away should not be in the screen.)
2) Select page: 0, address: 01, and set data: 01.
3) Select page: 6, address: 82, and set data: 01.
4) Select page: 6, address: 02, and check that the data is “00”.
5) Select page: 6, address: 01, set data: 13, and press the PAUSE button of the adjustment remote commander.
6) Place a ND filter on the lens so that the optimum image is obtain.
7) Select page: 6, address: 01, set data: 29, and press the PAUSE button.
(The adjustment data will be automatically input to page: F, addresses: 4E to 5D, 61)
8) Select page: 6, address: 02, and check that the data is “01”.

Processing after Completing Adjustments

1) Select page: 0, address: 01, and set data: 00.
2) Turn OFF the main power supply (8.4 V).
3) Perform “Flange Back Check”.

4. Flange Back Check

Subject	Siemens star (PTB-450) (2.0 m from the front of the lens) (Luminance : approx. 200 lux)
Measurement Point	Check operation on TV monitor
Measuring Instrument	
Specified Value	Focused at the TELE end and WIDE end.

Switch setting:

1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

Note: When the auto focus is ON, the lens can be checked if it is focused or not by observing the data on the page 1 of the adjustment remote commander.

1) Select page: 0, address: 03, and set data: 0F.
2) Page 1 shows the state of the focus.

1 : 00 : XX
Odd: Focused
Even: Unfocused

Checking method:

1) Place the Siemens star 2.0 m from the front of the lens.
2) To open the IRIS, decrease the luminous intensity to the Siemens star up to a point before noise appear on the image.
3) Select page: 6, address: 40, and set data: 02.
4) Select page: 6, address: 41, and set data: 01.
5) Shoot the Siemens star with the zoom TELE end.
6) Turn on the auto focus.
7) Check that the lens is focused (Note).
8) Select page: 6, address: 21, and set data: 10.
9) Shoot the Siemens star with the zoom WIDE end.
10) Observe the TV monitor and check that the lens is focused.

Processing after Completing Adjustments

1) Select page: 6, address: 21, and set data: 00.
2) Select page: 6, address: 40, and set data: 00.
3) Select page: 6, address: 41, and set data: 00.
4) Select page: 0, address: 03, and set data: 00.

5. Optical Axis Adjustment

Correct a deviation of optical axis between the lens and the CCD imager.

If deviated, the screen center will be shifted when the lens is zoomed from TELE end to WIDE end.

Subject	Siemens Star (PTB-450)
Measurement Point	Check operation on monitor TV
Measuring Instrument	
Adjustment Page	F
Adjustment Address	60

Note: “Flange Back Adjustment” must be already finished.

Switch setting:

1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

Preparation for adjustment:

1) Play a monoscope portion of the System Check tape (WR5-5ND(NTSC) or WR5-5CD(PAL)).
2) Stick the optical axis deviation specification frame to the monitor screen so that the center of monoscope coincides with the center of specification frame.
3) Select the CAMERA mode.

Adjustment method:

1) Select page:0, address:01, and set data:01.
2) Select page:F, address:60, and set data:00, then press the PAUSE button on the adjusting remote commander.
3) Place the Siemens Star at 2m position away from the lens.
4) Shoot the Siemens Star with the zoom at TELE end.
5) Change the lens direction so that the center of Siemens Star coincides with the center of optical axis deviation specification frame.
6) Shoot the Siemens Star with the zoom at WIDE end.
7) Check on the monitor TV which area the center of Siemens Star exists of the optical axis deviation specification frame.
   At this time, measure the amount of deviation “L1” (distance from the center of Siemens Star to the center of optical axis deviation specification frame).
8) From the following table, read correction data according to the area.

Area	Deviation Phase	Correction Data
1	22.6° to 67.5°	01
2	67.6° to 112.5°	02
3	112.6° to 157.5°	03
4	157.6° to 202.5°	04
5	202.6° to 247.5°	05
6	247.6° to 292.5°	06
7	292.6° to 337.5°	07
8	337.6° to 22.5°	08

9) Select page:F, address:60, and set correction data, then press the PAUSE button on the adjusting remote commander.
10) Shoot the Siemens Star with the zoom at TELE end.
11) Change the lens direction so that the center of Siemens Star coincides with the center of optical axis deviation specification frame.
12) Shoot the Siemens Star with the zoom at WIDE end.
13) Measure the amount of deviation “L2” (distance from the center of Siemens Star to the center of optical axis deviation specification frame).
14) Compare L1 and L2, and make sure that the L2 is smaller than L1.
    If large, select page:F, address:60, and set data:00, then press the PAUSE button on the adjusting remote commander.

Processing after completion of adjustment:

1) Select page:0, address:01, and set data:00.

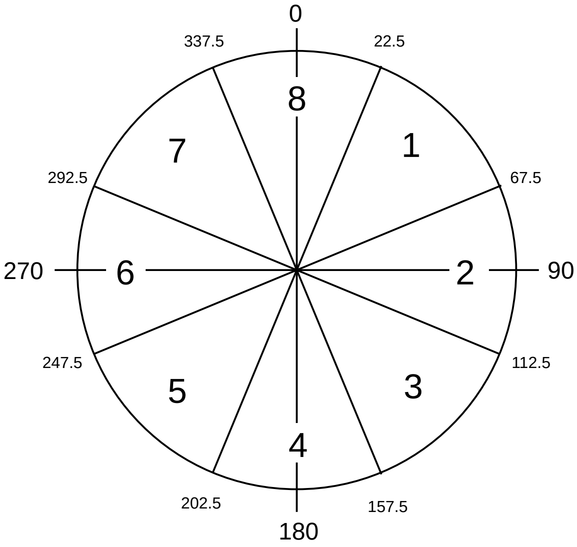


Fig. 5-1-8

6. Picture Frame Setting

Subject	Color bar chart (PTB-450) (Color reproduction adjustment frame) (1.5 m from the front of the lens)
Measurement Point	Video output terminal of A/V jack
Measuring Instrument	Oscilloscope and TV monitor
Specified Value	A=B, C=D, E=F

Note: "Flange Back Adjustment" must be already finished.

Switch setting:

1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

Setting method:

1) Select page: 6, address: 82, and set data: 01.
2) Adjust the zoom and the camera direction, and set to the specified position.
3) Select page: 6, address: 82, and set data: 00.
4) Mark the position of the picture frame on the monitor display, and adjust the picture frame to this position in following adjustments using "Color reproduction adjustment frame".

Check on the oscilloscope

1. Horizontal period

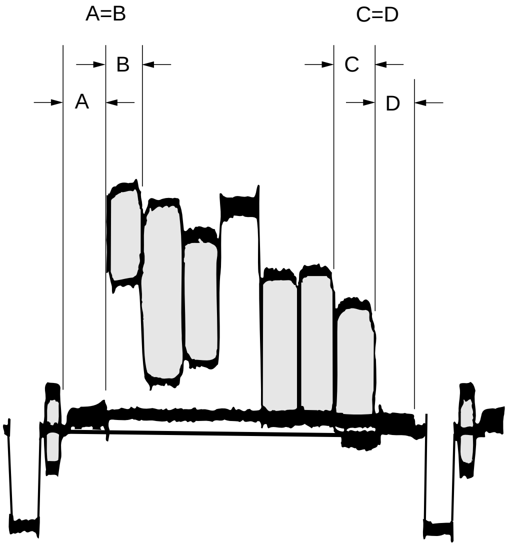


Fig. 5-1-9

2. Vertical period

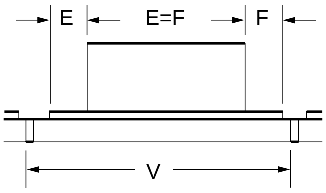


Fig. 5-1-10

Check on the monitor TV (Underscanned mode)

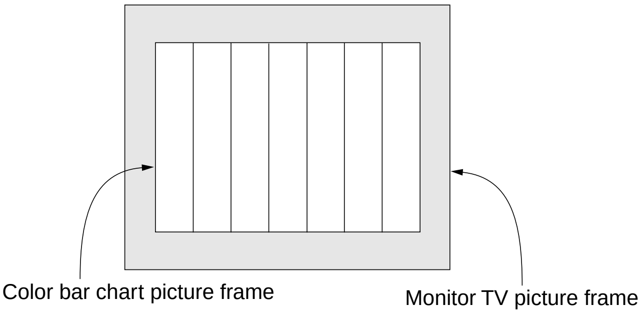


Fig. 5-1-11

7. Color Reproduction Adjustment

Adjust the color Separation matrix coefficient so that proper color reproduction is produced.

Subject	Color bar chart (PTB-450) (Color reproduction adjustment frame)
Measurement Point	Video output terminal of A/V jack
Measuring Instrument	Vectorscope
Adjustment Page	F
Adjustment Address	47, 49, D7, D8
Specified Value	All color luminance points should settle within each color reproduction frame.

Note: NTSC 720H model: DCR-TRV120/TRV120P
PAL 960H model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

Switch setting:

1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

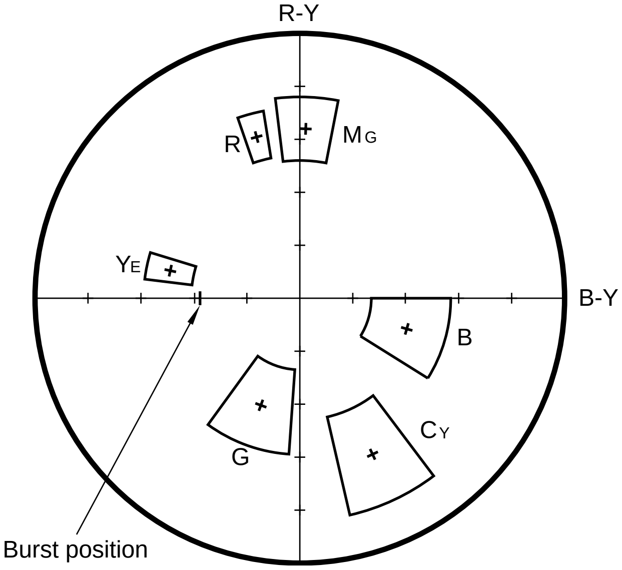
Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 6, address: 82, and set data: 01.
3) Select page: F, address: 8B. After note down the data of this address, set data: 29 to the address, and press the PAUSE button of the adjustment remote commander.
4) Select page: 6, address: 01, set data: 3D, and press the PAUSE button.
5) Select page: F, address: 2B, set data: 17 (NTSC 720H model) or data: 97 (PAL 960H model), and press the PAUSE button.
6) Adjust the GAIN and PHASE of the vectorscope, and adjust the burst luminance point to the burst position of the color reproduction frame.
7) Change the data of page: F, address: 47, 49, D7 and D8, and settle each color luminance point in each color reproduction frame.
   Note: Be sure to press the PAUSE button of the adjustment remote commander before changing the addresses. If not, the new data will not be written to the memory.
8) Select page: F, address: 8B, and set the data that is noted down at step 3).

Processing after Completing Adjustments

1) Select page: F, address: 2B, set data: 13 (NTSC 720H model) or data: 93 (PAL 960H model), and press the PAUSE button of the adjustment remote commander.
2) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
3) Select page: 6, address: 82, and set data: 00.
4) Select page: 0, address: 01, and set data: 00.

NTSC 720H model



PAL 960H model

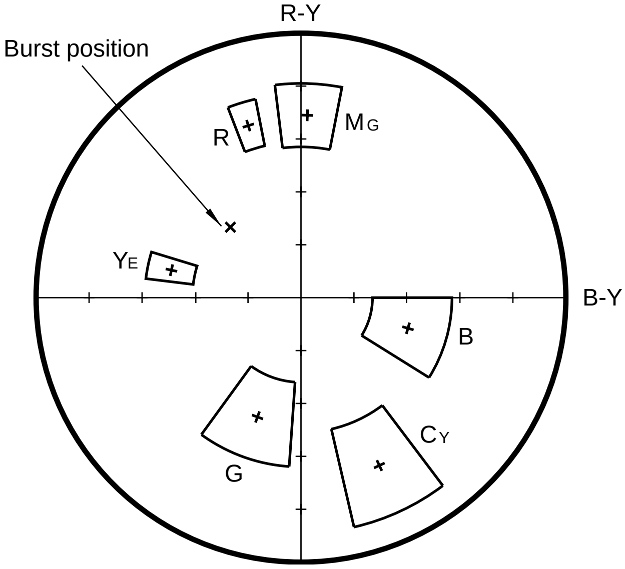


Fig. 5-1-12

8. AWB & LV Standard Data Input

Subject	Clear chart (PTB-450) (Color reproduction adjustment frame)
Adjustment Page	F
Adjustment Address	3C to 41

Note 1: This adjustment should be carried out upon completion of "Color Reproduction Adjustment".

Note 2: Check that the data of page: 6, address: 02 is "00". If not, turn the power of the unit OFF/ON.

Switch setting:

1) NIGHT SHOT ....OFF
2) DIGITAL ZOOM (Menu display) ....OFF
3) STEADY SHOT (Menu display) ....OFF

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 6, address: 82, and set data: 01.
3) Wait for 2 seconds.
4) Select page: 6, address: 01, set data: 11, and press the PAUSE button of the adjustment remote commander.
5) Select page: 6, address: 01, set data: 0D, and press the PAUSE button.
   (When the standard data is take in, the data will be automatically input to page: F, address: 3C to 41)
6) Select page: 6, address: 02, and check that the data is "01".

Processing after Completing Adjustments

1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander.
2) Select page: 6, address: 82, and set data: 00.
3) Select page: 0, address: 01, and set data: 00.
4) Perform "Auto White Balance Adjustment".

9. Auto White Balance Adjustment

Adjust to the proper auto white balance output data.
If it is not correct, auto white balance and color reproducibility will be poor.

Subject	Clear chart (PTB-450) (Color reproduction adjustment frame)
Filter	Filter C14 for color temperature correction
Measurement Point	Display data of page 1 (Note2)
Measuring Instrument	Adjustment remote commander
Adjustment Page	F
Adjustment Address	42, 43
Specified Value	NTSC 720H model R ratio: 2A40 to 2AC0 B ratio: 60A0 to 6160 PAL 960H model R ratio: 2C40 to 2CC0 B ratio: 5FA0 to 6060

Note 1: Perform "Auto White Balance Standard Data Input" before this adjustment.

Note 2: Displayed data of page 1 of the adjustment remote commander.

1 : XX : XX
Display data

Note 3: NTSC 720H model: DCR-TRV120/TRV120P
PAL 960H model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

Switch setting:

1) NIGHT SHOT ....OFF
2) DIGITAL ZOOM (Menu display) ....OFF
3) STEADY SHOT (Menu display) ....OFF

Adjusting method:

1) Place the C14 filter for color temperature correction on the lens.
2) Select page: 0, address: 01, and set data: 01.
3) Select page: 6, address: 82, and set data: 01.
4) Select page: F, addresses: B8 to BB, and note down the data of each address.
5) Input the following data to page: F, addresses: B8 to BB.

Address		B8	B9	BA	BB
Data	NTSC 720H model	2A	80	61	00
	PAL 960H model	2C	80	60	00

Note: Press the PAUSE button of the adjustment remote commander each time to set the data.

6) Select page: 6, address: 01, set data: A7, and press the PAUSE button.
7) Wait for 2 seconds.
8) Select page: 6, address: 01, set data: A5, and press the PAUSE button.
   (The auto white balance adjustment is performed and the adjustment data is stored in page: F, address: 42 and 43.)
9) Select page: 6, address: 02, and check that the data is "01".
10) Select page: 6, address: 01, set data: 3F, and press the PAUSE button.
11) Select page: 0, address: 03, and set data: 04.
12) Select page: 1, and check that the display data (Note2) satisfies the R ratio specified value.
13) Select page: 0, address: 03, and set data: 05.
14) Select page: 1, and check that the display data (Note2) satisfies the B ratio specified value.
15) Select page: F, addresses: B8 to BB, and input the data noted down at step 3).

Note: After setting each data, be sure to press the PAUSE button of the adjustment remote commander.

Processing after Completing Adjustments

1) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
2) Select page: 6, address: 82, and set data: 00.
3) Select page: 0, address: 03, and set data: 00.
4) Select page: 0, address: 01, and set data: 00.

10. White Balance Check

Subject	Clear chart (PTB-450) (Color reproduction adjustment frame)
Filter	Filter C14 for color temperature correction ND filter 1.0, 0.4 and 0.1
Measurement Point	Video output terminal of A/V jack
Measuring Instrument	Vectorscope
Specified Value	Fig. 5-1-13 A to C

Switch setting:

1) NIGHT SHOT .... OFF
2) DIGITAL ZOOM (Menu display) .... OFF
3) STEADY SHOT (Menu display) .... OFF

Checking method:

1) Check that the lens is not covered with either filter.
2) Select page: 6, address: 82, and set data: 01.
3) Select page: 6, address: 01, set data: 0F, and press the PAUSE button of the adjustment remote commander.
4) Check that the center of the white luminance point is within the circle shown Fig. 5-1-13 (A).
5) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
6) Select page: 6, address: 01, set data: 23, and press the PAUSE button.
7) Place the C14 filter on the lens.
8) Check that the center of the white luminance point settles in the circle shown Fig. 5-1-13 (B).
9) Remove the C14 filter, and place the ND filter 1.5 (1.0 + 0.4 + 0.1) on the lens.
10) Check that the white luminance point stopped moving, and then remove the ND filter 1.5.
11) Check that the center of the white luminance point settles within the circle shown Fig. 5-1-13 (C).

Processing after Completing Adjustments

1) Select page: 6, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander.
2) Select page: 6, address: 82, and set data: 00.

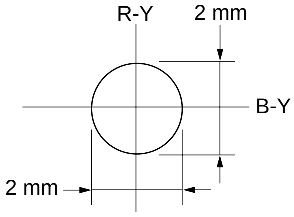


Fig. 5-1-13 (A)

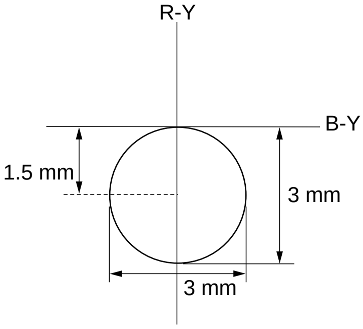


Fig. 5-1-13 (B)

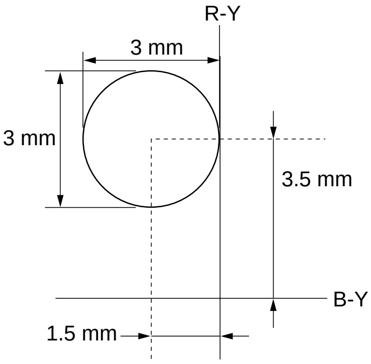


Fig. 5-1-13 (C)

11. Angular Velocity Sensor Sensitivity Data Preset and Steady Shot Check

Check the angular velocity sensor output.

Precautions on the Parts Replacement

There are two types of repair parts.

Type A	ENC03JA
Type B	ENC03JB

Replace the broken sensor with a same type sensor. If replace with other type parts, the image will vibrate up and down or left and right during hand-shake correction operations.

Precautions on Angular Velocity Sensor

The sensor incorporates a precision oscillator. Handle it with care as if it dropped, the balance of the oscillator will be disrupted and operations will not be performed properly.

Subject	Not required
Measurement Point	Display data of page 1 (Note 1)
Measuring Instrument	Adjustment remote commander
Adjustment Page	F
Adjustment Address	5E, 5F
Specified Value	PITCH data: 2900 to 4D00 YAW data: 2900 to 4D00

Note 1: Displayed data of page 1 of the adjustment remote commander.

1 : XX : XX

Display data

Note 2: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E/
TR8000E/TR8100E

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: F, address: 5E, set data: 69 (NTSC model) or 9C (PAL model), and press the PAUSE button.
3) Select page: F, address: 5F, set data: 63 (NTSC model) or A0 (PAL model), and press the PAUSE button.
4) Select page: 0, address: 03, and set data: 11.
5) Select page: 1, and check that the display data (Note 1) during PITCH data satisfies the specified value.
6) Select page: 0, address: 03, and set data: 12.
7) Select page: 1, and check that the display data during YAW data satisfies the specified value.

Processing after Completing Adjustments

1) Select page: 0, address: 03, and set data: 00.
2) Select page: 0, address: 01, and set data: 00.
3) Check that the steady shot operations have been performed normally.

1-4. MONOCHROME ELECTRONIC VIEWFINEDER SYSTEM ADJUSTMENTS

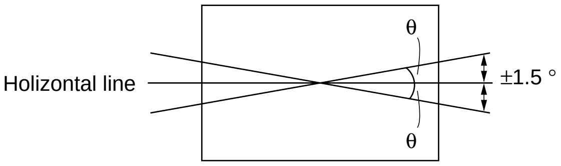
Note: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

1-4-1. Horizontal Slant Check

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section
Specified Value	± 1.5°

Adjustment method:

1) Adjust RV904 (BRIGHT) (VF-129 board) so that the CRT can be seen easily and clearly.
2) Check that the difference between the horizontal line and the tilt of black mask satisfies the specified value.


θ
Holizontal line
±1.5 °
θ

Specified value : The image should be within ± 1.5 ° of the holizontal line.

Fig. 5-1-14

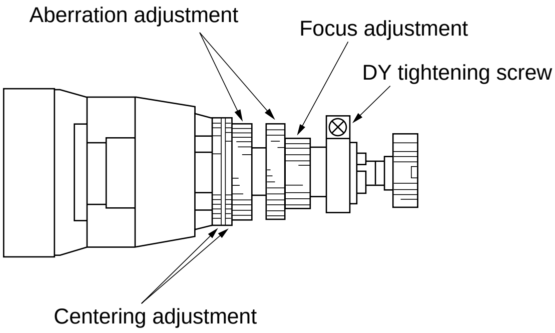

Aberration adjustment
Focus adjustment
DY tightening screw
Centering adjustment

Fig. 5-1-15

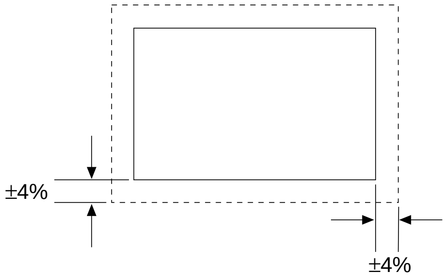
1-4-2. Centering Adjustment

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section
Specified Value	± 4%

Adjustment method:

1) Use the centering adjustment ring and adjust so that the left, light, top, and bottom sides of the display are uniform. (Refer to Fig. 5-1-14)

   Note: As the centering position changes due to earth magnetism, rotate it 360° in the horizontal direction, and adjust with the center section of the modifying position.



Adjustment value : ±4%

Fig. 5-1-16

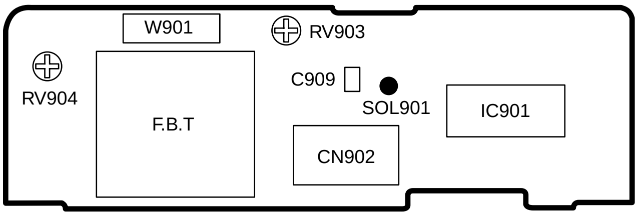
1-4-3. Focus Adjustment

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section

Adjustment method:

1) Adjust the focus ring to obtain the optimum focus. (Refer to Fig. 5-1-14)

VF-129 BOARD


W901
RV903
RV904
C909
SOL901
IC901
F.B.T
CN902

1-4-4. Aberration Adjustment

Mode	VTR stop
Signal	Dot pattern
Specified Value	b1 ≦ 2 × a1 b2 ≦ 0.8 × a2

Adjustment method:

1) Adjust the aberration adjustment ring so that the tracing of the dot satisfies the specified value.
2) If the centering becomes displaced here, perform the centering adjustment from the beginning again.

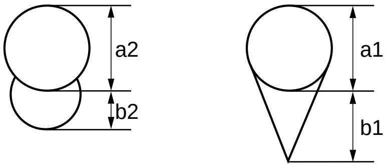


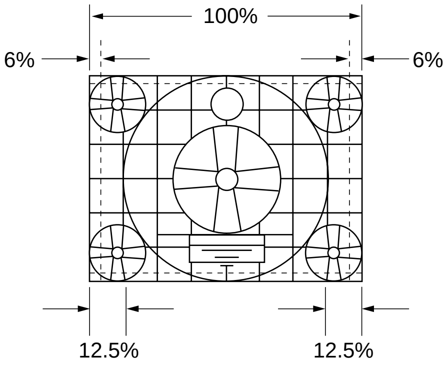
Fig. 5-1-17

1-4-5. Horizontal Amplitude Adjustment (VF-129 board)

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section
Adjusting Element	C909 (SOL901)
Specified Value	12 ± 6%

Adjustment method:

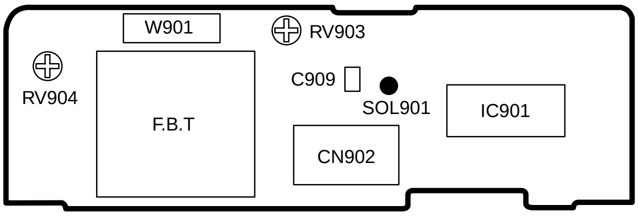
1) Rotate RV903, and adjust the top and bottom side of the monoscope image to the top and bottom edges of the display.
2) Rotate RV904 so that the brightness is the normal level.
3) Solder or unsolder SOL901 pattern of the H size adjustment capacitor (C909) to “short” or “open”, so that the horizontal direction over scan becomes 12 ± 6% (Left and right totals).



SOL901	Size H
Open	Small
Short	Big

Fig. 5-1-18

VF-129 BOARD



1-4-6. Vertical Amplitude Adjustment (VF-129 board)

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section
Adjusting Element	RV903
Specified Value	10 ± 3%

Adjustment method:

1) Adjust RV903 so that the vertical direction over scan becomes 10 ± 3% (Top and bottom totals).

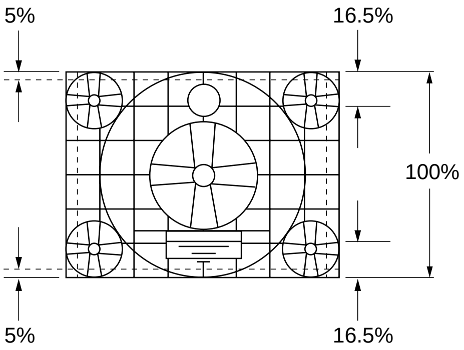
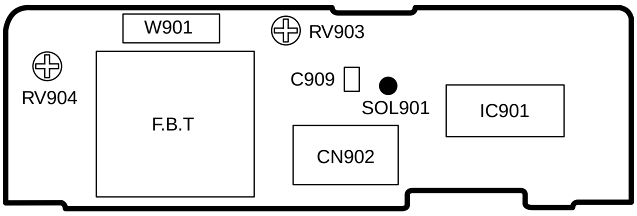


Fig. 5-1-19

VF-129 BOARD



1-4-7. Brightness Adjustment (VF-129 board)

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape : For checking operation (WR5-8NSE(NTSC)) (WR5-8CSE(PAL)) Monoscope section
Adjusting Element	RV904

Adjustment method:

1) Rotate RV904, and adjust so that the bright/dark sections of gray scale are displayed correctly. (The bright section should be unsatisfactory till the cross hatch appears vague in the monoscope circle. The dark section should be unsatisfactory till the darkest section of the gray scale cannot be differentiate.)

1-4-8. Horizontal Amplitude, Vertical Amplitude, Focus Check

“1-4-5. Horizontal Amplitude Adjustment” and “1-4-6. Vertical Amplitude Adjustment” should be both satisfy the specified values. If not, perform the adjustments from the beginning again. In this case, perform “1-4-7. Brightness Adjustment” again.
Moreover, check the focus, and if it found to be vague, perform “1-4-3. Focus Adjustment” and “1-4-4. Aberration Adjustment”.

1-5. LCD SYSTEM ADJUSTMENTS (DCR-TRV120/TRV120E/TRV120P/TRV125E)

Note 1: The back light (fluorescent tube) is driven by a high voltage AC power supply. Therefore, do not touch the back light holder to avoid electrical shock.

Note 2: When replacing the LCD unit, be careful to prevent damages caused by static electricity.

Note 3: Set the LCD BRIGHT to the center.
Set the LCD COLOR (Menu display) to the center.

Note 4: TYPE S 61 k model: DCR-TRV120/TRV120P
TYPE S 123 k model: DCR-TRV120E: AEP, UK, EE, NE, RU/TRV125E
TYPE C model: DCR-TRV120E: E, HK, AUS, CN, JE

[Adjusting connector]

Most of the measuring points for adjusting the LCD display are concentrated in the following connector.
CN5502 of the PD-117 board
Connect the Measuring Instruments via the multi CPC jig (J-6082-311-A).
The following table shows the Pin No. and signal name of the connector.

Pin No.	Signal Name	Pin No.	Signal Name
1	VB	2	XVD OUT
3	VG	4	PANEL COM
5	VR	6	N.C.
7	C-SYNC/XHD	8	XHD OUT
9	GND	10	GND

[LCD type check]

By measuring the resistor value between Pin ⑥ of CN5502 and Pin ⑩ of CN5502, the type of LCD can be discriminated.

PD-117 board CN5502

Resistor value	LCD type	Model
1 kΩ	TYPE S 61 k	DCR-TRV120/TRV120P
1.5 kΩ	TYPE C	DCR-TRV120E: E, HK, AUS, CN, JE
2.2 kΩ	TYPE S 123 k	DCR-TRV120E: AEP, UK, EE, NE, RU/TRV125E

Abbreviation
EE : East European model
NE : North European model
RU : Russian model
HK : Hong Kong model
AUS : Australian model
CN : Chinese model
JE : Tourist model

1. LCD Initial Data Input (1)

Mode	VTR stop
Signal	Arbitrary
Adjustment Page	C
Adjustment Address	AB to BA

Adjusting method:

1) Select page: 0, address:01, and set data: 01.
2) Select page: C, and input the data in the following table.
   Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.
3) Select page: 0, address:01, and set data: 00.

Address	Data	Remark
AB	53	Fixed data
AC	00	
AD	90	
AE	CB	
AF	66	
B0	26	
B1	00	
B2	00	
B3	20	
B4	0A	
B5	24	
B6	1A	
B7	08	
B8	17	
B9	21	
BA	23	

2. LCD Initial Data Input (2)

Mode	VTR stop
Signal	Arbitrary
Adjustment Page	D
Adjustment Address	A0 to AA, AC to B1

Note: TYPE S 61 k model: DCR-TRV120/TRV120P
TYPE S 123 k model: DCR-TRV120E: AEP, UK, EE, NE, RU/TRV125E
TYPE C model: DCR-TRV120E: E, HK, AUS, CN, JE

Adjusting method:

1) Select page: 0, address:01, and set data: 01.
2) Select page: D, and input the data in the following table.
   Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.
3) Select page: 0, address:01, and set data: 00.

Address	Data			Remark
	TYPE S		TYPE C	
	61 k	123 k		
A0	78	78	78	Fixed data
A1	95	95	95	
A2	80	80	80	VCO adj.
A3	70	70	70	VCO adj. (PAL model) Fixed data (NTSC model)
A4	80	80	80	V-COM adj.
A5	30	30	20	RGB AMP adj.
A6	00	00	00	Fixed data
A7	C0	C0	80	COM AMP adj.
A8	80	80	80	White balance adj.
A9	80	80	80	
AA	50	50	30	Contrast adj.
AC	14	33	0A	Fixed data
AD	14	14	0E	
AE	9F	9F	9F	
AF	1F	1F	1F	
B0	FC	FC	FC	
B1	FF	FF	FF	

3. VCO Adjustment (PD-117 board)

Set the VCO free-run frequency. If deviated, the LCD screen will be blurred.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ⑧ of CN5502 (XHD OUT)
Measuring Instrument	Frequency counter
Adjustment Page	D
Adjustment Address	A2 (NTSC model) A2, A3 (PAL model)
Specified Value	f=15734 ± 30 Hz (NTSC model) f=15625 ± 30 Hz (PAL model)

Note 1: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E

Adjusting method (NTSC model):

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: A2, change the data and set the VCO frequency (f) to the specified value.
3) Press the PAUSE button of the adjustment remote commander.
4) Select page: 0, address: 01, and set data: 00.

Adjusting method (PAL model):

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: A2, change the data, and set the VCO frequency (f) to the specified value.
3) Press the PAUSE button of adjustment remote commander.
4) Read the adjustment data of step 2), and this data is named DA2.
5) Convert DA2 to decimal notation, and obtain DA2'.
   (Refer to Table 5-4-1 "Hexdecimal-decimal conversion table" of "5-4. Service Mode")
6) Calculate DA3' using following equations (decimal calculation), convert it to a hexdecimal number, and obtain DA3.
   TYPE C model: DA3' = DA2' – 16
   TYPE S 123 k model: DA3' = DA2' – 23
   Note2: If DA3' < 0, then DA3 = "00"
7) Select page: D, address: A3, set data DA3, and then press the PAUSE button of adjustment remote commander.
8) Select page: 0, address: 01, and set data: 00.

4. RGB AMP Adjustment (PD-117 board)

Set the D range of the RGB driver used to drive the LCD to the specified value. If deviated, the LCD screen will become blackish or saturated (whitish).

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ③ of CN5502 (VG) External trigger : Pin ④ of CN5502 (PANEL COM)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	A5
Specified Value	A=3.59 ± 0.05 Vp-p (TYPE S model) A=2.81 ± 0.05 Vp-p (TYPE C model)

Note: TYPE S model: DCR-TRV120/TRV120E: AEP, UK, EE, NE, RU/TRV120P/TRV125E
TYPE C model: DCR-TRV120E: E, HK, AUS, CN, JE

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: A5, change the data and set the voltage (A) between the reversed waveform pedestal and non-reversed waveform pedestal to the specified value.
(The data of address: A5, should be “00” to “3F”)
3) Press the PAUSE button.
4) Select page: 0, address: 01, and set data: 00.

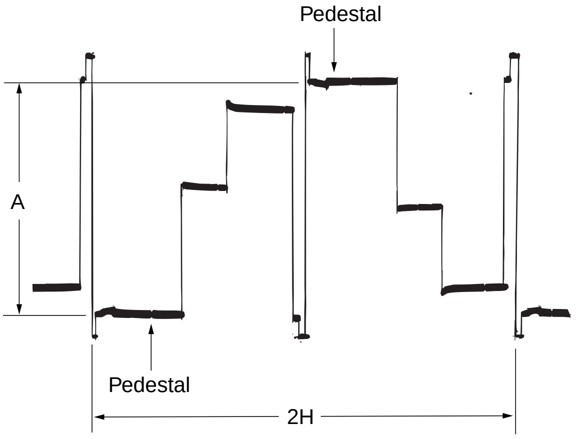


Fig. 5-1-20

5. Contrast Adjustment (PD-117 board)

Set the level of the VIDEO signal for driving the LCD to the specified value. If deviated, the screen image will be blackish or saturated (whitish).

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ③ of CN5502 (VG) External trigger : Pin ④ of CN5502 (PANEL COM)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	AA
Specified Value	A=3.47 ± 0.07 Vp-p (TYPE S 61 k model) A=3.34 ± 0.07 Vp-p (TYPE S 123 k model) A=2.80 ± 0.07 Vp-p (TYPE C model)

Note: TYPE S 61 k model: DCR-TRV120/TRV120P
TYPE S 123 k model: DCR-TRV120E: AEP, UK, EE, NE, RU/TRV125E
TYPE C model: DCR-TRV120E: E, HK, AUS, CN, JE

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: AA, change the data and set the voltage (A) between the pedestal (0 IRE) and 100 IRE to the specified value.
(The data of address: AA, should be “00” to “7F”)
3) Press the PAUSE button.
4) Select page: 0, address: 01, and set data: 00.

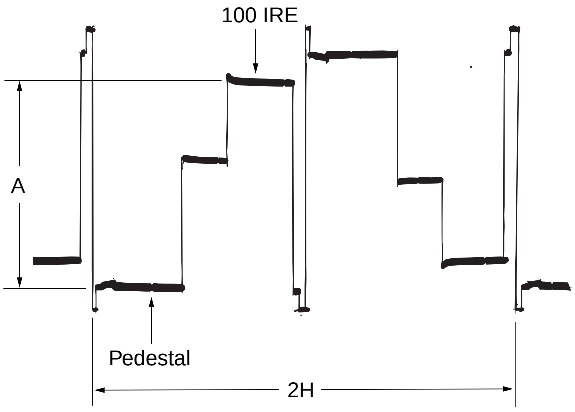


Fig. 5-1-21

6. COM AMP Adjustment (PD-117 board)

Set the common electrode drive signal level of LCD to the specified value.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ④ of CN5502 (PANEL COM)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	A7
Specified Value	A=6.33 ± 0.05 Vp-p (TYPE S model) A=5.05 ± 0.05 Vp-p (TYPE C model)

Note: TYPE S model: DCR-TRV120/
TRV120E: AEP, UK, EE, NE, RU/
TRV120P/TRV125E
TYPE C model: DCR-TRV120E: E, HK, AUS, CN, JE

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: A7, change the data and set the PANEL COM signal level (A) to the specified value.
3) Press the PAUSE button.
4) Select page: 0, address: 01, and set data: 00.

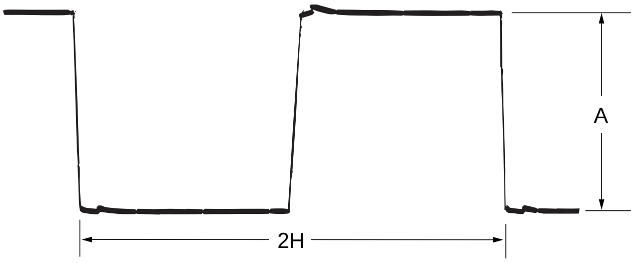


Fig. 5-1-22

7. V-COM Adjustment (PD-117 board)

Set the DC bias of the common electrode drive signal of LCD to the specified value.

If deviated, the LCD display will move, producing flicker and conspicuous vertical lines.

Mode	Camera
Subject	Arbitrary
Measurement Point	Check on LCD display
Measuring Instrument	
Adjustment Page	D
Adjustment Address	A4

Note: Perform “RGB AMP Adjustment”, “Contrast Adjustment” and “COM AMP Adjustment” before this adjustments.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: A4, change the data so that the brightness of the section A and that of the section B is equal.
3) Read the adjustment data of step 2), and this data is named Dref.
4) Convert Dref to decimal notation, and obtain Dref’.
(Refer to Table 5-4-1 “Hexdecimal-decimal conversion table” of”5-4. Service Mode”)
5) Calculate D_{A4}’ using following equations (decimal calculation), convert it to a hexdecimal number, and obtain D_{A4}.
D_{A4}’=Dref’–8
6) Select page: D, address: A4, set data D_{A4}, and then press the PAUSE button of adjustment remote commander.
7) Select page: 0, address: 01, and set data: 00.

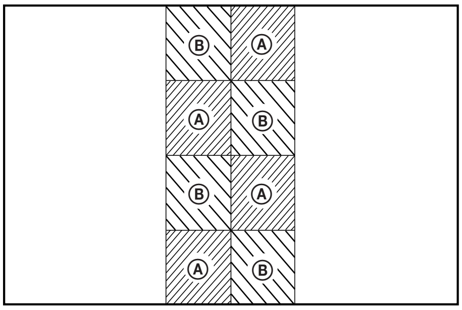


Fig. 5-1-23

8. White Balance Adjustment (PD-117 board)

Correct the white balance.

If deviated, the LCD screen color cannot be reproduced.

Mode	Camera
Subject	Arbitrary
Measurement Point	Check on LCD display
Measuring Instrument	
Adjustment Page	D
Adjustment Address	A8, A9
Specified Value	The LCD screen should not be colored.

Note 1: Check the white balance only when replacing the following parts. If necessary, adjust them.

1. LCD panel
2. Light induction plate
3. IC5501

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.

2) Select page: D, address: A8 and A9, and set the data to the initial value.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

Address	Data
A8	80
A9	80

3) Check that the LCD screen is not colored. If colored, change the data of page: D, address: A8 and A9 so that the LCD screen is not colored.

Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.

4) Select page: 0, address: 01, and set data: 00.

5-2. MECHANISM SECTION ADJUSTMENT

Mechanism Section adjustments, checks, and replacement of mechanism parts, refer to the separate volume "8 mm Video Mechanism Adjustment Manual VII B Mechanism ".

Note 1: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

2-1. Hi8/STANDARD 8 mm MODE

2-1-1. HOW TO ENTER PLAYBACK MODE WITHOUT CASSETTE

1) Refer to "Section 2. DISASSEMBLY" and supply the power with the cabinet assembly removed. (So that the mechanical deck can be operated.)
2) Connect the adjustment remote commander to the LANC jack.
3) Turn on the HOLD switch of the adjustment remote commander.
4) Close the cassette compartment without loading a cassette and complete loading.
5) Select page: 0, address: 01, and set data: 01.
6) Select page: F, address: 22, set data: 81, and press the PAUSE button of the adjustment remote commander.
7) Select page: D, address: 10, set data: 10, and press the PAUSE button of the adjustment remote commander.
8) Select page: 2, address: 2E, and set data: 02.
9) Press the PLAY button of the unit.

Note2: Be sure to carry out "Processing after checking Operations" after checking the operations.
Set the data of page: D, address: 10 to "12", if the sensor ineffective mode, forced VTR power supply ON mode is to be used together.

[Procedure after checking operations]

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 2, address: 2E, and set data: 00.
3) Select page: F, address: 22, set data: 80, and press the PAUSE button of the adjustment remote commander.
4) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjustment remote commander.
5) Select page: 0, address: 01, and set data: 00.
6) Disconnect the power supply of the unit.

2-1-2. TAPE PATH ADJUSTMENT

1. Preparations for Adjustment

1) Clean the tape path face (tape guide, capstan shaft, pinch roller).
2) Connect the adjustment remote commander to the LANC jack.
3) Turn on the HOLD switch of the adjustment remote commander.
4) Select page: 0, address: 01, and set data: 01.
5) Select page: 2, address: 2E, and set data: 02.
6) Select page: F, address: 22, set data: 88, and press the PAUSE button of the adjustment remote commander.
(Be sure to perform "Processing after operation" after completing adjustments)
7) Connect the oscilloscope to VC-235 board CN1108 via CPC-13 jig (J-6082-443-A).
Channel 1: VC-235 board, CN1108 Pin ⑤
External trigger: VC-235 board, CN1108 Pin ⑧
8) Playback Hi8/standard 8 mm alignment tape for tracking.
(WR5-1NP(NTSC))
(WR5-1CP(PAL))
9) Check that the oscilloscope RF waveform is flat at the entrance and exit.
If not flat, adjust according to the separate volume "8 mm Video Mechanical Adjustment Manual VII B Mechanism ".
10) Perform "Processing after operations", after completing adjustment.

CN1108 of VC-235board

Pin No.	Signal Name	Pin No.	Signal Name
1	SWP	11	VCO
2	AFC F0	12	EVF VG
3	BPF MONI	13	DV RF SWP
4	F0 ADJ RF IN	14	RF IN
5	PB RF	15	CAP FG
6	REG GND	16	RF MON
7	RF AGC OUT	17	TMS
8	VC RF SWP	18	TCK
9	EVF BL	19	TDO
10	EVF BL 4.6V	20	TDI

Table 5-2-1

[Procedure after operations]

1) Connect the adjustment remote commander, and turn on the HOLD switch.
2) Select page: 0, address: 01, and set data: 01.
3) Select page: 2, address: 2E, and set data: 00.
4) Select page: F, address: 22, set data: 80, and press the PAUSE button of the adjustment remote commander.
5) Select page: 0, address: 01, and set data: 00.
6) Remove the power supply from the unit.

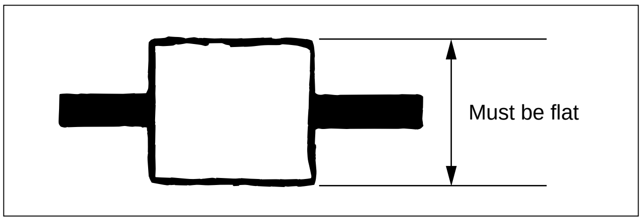


Fig. 5-2-1

2-2. DIGITAL8 MODE

2-2-1. HOW TO ENTER RECORD MODE WITHOUT CASSETTE

1) Connect the adjustment remote commander to the LANC jack.
2) Turn the HOLD switch of the adjustment remote commander to the ON position.
3) Close the cassette compartment without the cassette.
4) Select page: 3, address: 01, and set data: 0C, and press the PAUSE button of the adjustment remote commander.
   (The mechanism enters the record mode automatically)
   Note: The function buttons becomes inoperable.
5) To quit the record mode, select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander. (Whenever you want to quit the record mode, be sure to quit following this procedure)

2-2-2. HOW TO ENTER PLAYBACK MODE WITHOUT CASSETTE

1) Connect the adjustment remote commander to the LANC jack.
2) Turn the HOLD switch of the adjustment remote commander to the ON position.
3) Close the cassette compartment without the cassette.
4) Select page: 3, address: 01, and set data: 0B, and press the PAUSE button of the adjustment remote commander.
   (The mechanism enters the playback mode automatically)
   Note: The function buttons becomes inoperable.
5) To quit the playback mode, select page: 3, address: 01, set data: 00, and press the PAUSE button of the adjustment remote commander. (Whenever you want to quit the playback mode, be sure to quit following this procedure)

2-2-3. OVERALL TAPE PATH CHECK

1. Recording of the tape path check signal

1) Clean the tape running side (tape guide, capstan shaft, pinch roller).
2) Connect the adjustment remote commander to the LANC jack.
3) Turn the HOLD switch of the adjustment remote commander to the ON position.
4) Set to the camera recording mode.
5) Select page: 3, address: 1C, set data: 5D, and press the PAUSE button of the adjustment remote commander.
6) Record for several minutes.
7) Release the camera recording mode.
8) Select page: 3, address: 1C, set data: 00, and press the PAUSE button.

2. Tape path check

1) Clean the tape running side (tape guide, capstan shaft, pinch roller).
2) Connect the adjustment remote commander to the LANC jack.
3) Turn the HOLD switch of the adjustment remote commander to the ON position.
4) Connect an oscilloscope to VC-235 board CN1108 via the CPC-13 jig (J-6082-443-A).
   Channel 1: VC-235 board, CN1108 Pin ⑯ (Note)
   External trigger: VC-235 board, CN1108 Pin ⑬
   Note: Connect a 75 Ω resistor between Pins ⑯ of CN1108 and ⑥ (GND).
5) Select page: 2, address: 2E, and set data: 01.
6) Playback the tape path check signal.
7) Select page: 3, address: 33, and set data: 08.
8) Select page: 3, address: 26, and set data: 31.
9) Check that the oscilloscope RF waveform is flat at the entrance and exit.
   If not flat, perform “2-1-2. TAPE PATH ADJUSTMENT “ of “2-1. Hi8/STANDARD 8 mm MODE”.
10) Select page: 3, address: 26, and set data: 00.
11) Select page: 3, address: 33, and set data: 00.
12) Select page: 2, address: 2E, and set data: 00.

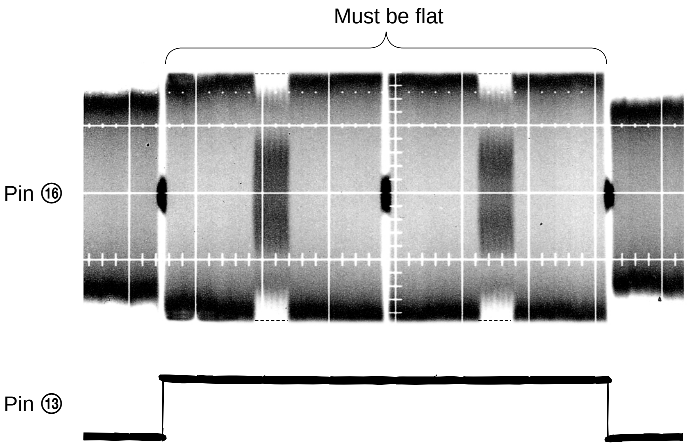


Fig. 5-2-2

5-3. VIDEO SECTION ADJUSTMENT

3-1. PREPARATIONS BEFORE ADJUSTMENTS

Use the following measuring instruments for video section adjustments.

Note: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

3-1-1. Equipment to Required

1) TV monitor
2) Oscilloscope (dual-phenomenon, band width above 30 MHz with delay mode) (Unless specified otherwise, use a 10 : 1 probe.)
3) Frequency counter
4) Pattern generator with video output terminal
5) Digital voltmeter
6) Audio generator
7) Audio level meter
8) Audio distortion meter
9) Audio attenuator
10) Regulated power supply
11) Digital8 alignment tapes
    - SW/OL standard (WR5-2D)
      Parts code: 8-967-993-22
    - Audio operation check for NTSC (WR5-3ND)
      Parts code: 8-967-993-32
    - System operation check for NTSC (WR5-5ND)
      Parts code: 8-967-993-42
    - Audio operation check for PAL (WR5-3CD)
      Parts code: 8-967-993-37
    - System operation check for PAL (WR5-5CD)
      Parts code: 8-967-993-47
12) NTSC Hi8/standard 8 mm alignment tapes (For NTSC model)
    - For tracking adjustment (WR5-1NP)
      Parts code: 8-967-995-02
    - For video frequency characteristics adjustment (WR5-7NE)
      Parts code: 8-967-995-13
    - For checking Standard 8 mode operations
      For LP (WR5-4NL)
        Parts code: 8-967-995-51
      For SP (WR5-5NSP)
        Parts code: 8-967-995-42

    Note: The following alignment tapes can also be used.
    WR5-4NSP (8-967-995-41)
    - For checking Hi8 mode operations
      For LP (WR5-8NLE)
      Parts code: 8-967-995-52
      For SP (WR5-8NSE)
      Parts code: 8-967-995-43
    - For Checking AFM stereo operations (WR5-9NS)
      Parts code: 8-967-995-23
    - For BPF adjustment (WR5-11NS)
      Parts code: 8-967-995-71
13) PAL Hi8/standard 8 mm alignment tapes (For PAL model)
    - For tracking adjustment (WR5-1CP)
      Parts code: 8-967-995-07
    - For video frequency characteristics adjustment (WR5-7CE)
      Parts code: 8-967-995-18
    - For checking Standard 8 mode operations
      For LP (WR5-4CL)
        Parts code: 8-967-995-56
      For SP (WR5-5CSP)
        Parts code: 8-967-995-47

    Note: The following alignment tapes can also be used.
    1) WR5-3CL (8-967-995-36)
    2) WR5-4CSP (8-967-995-46)
    - For checking Hi8 mode operations
      For LP (WR5-8CLE)
        Parts code: 8-967-995-57
      For SP (WR5-8CSE)
        Parts code: 8-967-995-48
    - For Checking AFM stereo operations (WR5-9CS)
        Parts code: 8-967-995-28
    - For BPF adjustment (WR5-11CS)
        Parts code: 8-967-995-76
14) Adjustment remote commander (J-6082-053-B)
15) CPC-13 jig (J-6082-443-A)
16) Power code (J-6082-223-A)

    Note: Connect the adjustment remote commander to the LANC jack, and set the HOLD switch to the “ADJ” side.
17) IR receiver jig (J-6082-383-A)

3-1-2. Precautions on Adjusting

1) The adjustments of this unit are performed in the VTR mode or camera mode.
   To set to the VTR mode, set the power switch to "VTR or PLAYER" or set the "Forced VTR Power ON mode" using the adjustment remote commander (Note 1).
   To set to the Camera mode, set the power switch to "CAMERA" or set the "Forced Camera Power ON mode" using the adjustment remote commander (Note 2).
   After completing adjustments, be sure to exit the "Forced VTR Power ON Mode" or "Forced Camera Power ON Mode". (Note 3)
2) The front panel block (MI-37 board, focus dial, microphone unit) need not be connected except during "Battery end adjustment" and "IR transmitter adjustment". To remove, disconnect the following connectors.
   VC-235 board CN1111 (32P 0.5 mm)
3) By setting the "Forced VTR Power ON mode" or "Forced Camera Power ON mode", the video section can be operate even if even if the cabinet (R) block (Camera function switch (CF-69/71 board), LCD block (TRV model only), viewfinder. power switch) has been removed. But removing the cabinet (R) block (removing the VC-235 board CN1105) means removing the lithium 3 V power supply (CF-69/71 board BH001) , data such as date, time, user-set menus will be lost. After completing adjustments, reset these data. If the cabinet (R) block has been removed, the self-diagnosis data, data on history of use (total drum rotation time etc.) will be lost. Before removing, note down the self-diagnosis data and data on history use (data of page: 2, address: A2 to AA). (Refer to "SELF-DIAGNOSIS FUNCTION" for the self-diagnosis data, and to "5-4. Service Mode" for the data on the history use.) To remove the cabinet (R), disconnect the following connectors.
   1. VC-235 board CN1105 (45P, 0.5 mm)
   2. VC-235 board CN1109 (8P, 1.0 mm) (TRV model only)
4) The lens block (CD-242/244/269 board) and the intelligent accessory shoe need not be connected except during "Battery end adjustment". To remove, disconnect the following connectors.
   1. VC-235 board CN1501 (16P, 0.5 mm)
   2. VC-235 board CN1551 (24P, 0.5 mm)
   3. Intelligent accessory shoe (8P, 0.8 mm)

Note 1: Setting the "Forced VTR Power ON" mode (VTR mode)
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 02, and press the PAUSE button of the adjustment remote commander.
   The above procedure will enable the VTR power to be turned on with the power switch (SS-10000 block) removed.
   After completing adjustments, be sure to exit the "Forced VTR Power ON mode".

Note 2: Setting the "Forced Camera Power ON" mode (Camera mode)
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 01, and press the PAUSE button of the adjustment remote commander.
   The above procedure will enable the camera power to be turned on with the power switch (SS-10000 block) removed.
   After completing adjustments, be sure to exit the "Forced Camera Power ON mode".

Note 3: Exiting the "Forced Power ON" mode
1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 10, set data: 00, and press the PAUSE button of the adjustment remote commander.
3) Select page: 0, address: 01, and set data: 00.

Note 4: TRV model: DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model: DCR-TR8000E/TR8100E

	CF board	PD board
TRV model	CF-69	PD-117
TR model	CF-71	–

Note 5: 720H model: DCR-TRV120/TRV120P
960H model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

	CD board
720H model	CD-242
960H model	CD-244/269

3-1-3. Adjusting Connectors

Some of the adjusting points of the video section are concentrated at VC-235 board CN1108. Connect the measuring instruments via the CPC-13 jig (J-6082-443-A). The following table lists the pin numbers and signal names of CN1108.

Pin No.	Signal Name	Pin No.	Signal Name
1	SWP	11	VCO
2	AFC F0	12	EVF VG
3	BPF MONI	13	DV RF SWP
4	F0 ADJ RF IN	14	RF IN
5	PB RF	15	CAP FG
6	REG GND	16	RF MON
7	RF AGC OUT	17	TMS
8	VC RF SWP	18	TCK
9	EVF BL	19	TDO
10	EVF BL 4.6V	20	TDI

Table 5-3-1

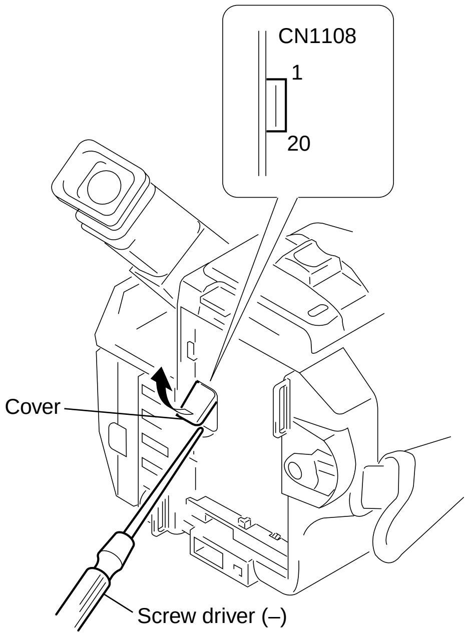

CN1108
1
20
Cover
Screw driver (–)

Fig. 5-3-1

3-1-4. Connecting the Equipment

Connect the measuring instruments as shown in Fig. 5-3-2 and perform the adjustments.

Connecting the TV Monitor and Regulated Power Supply

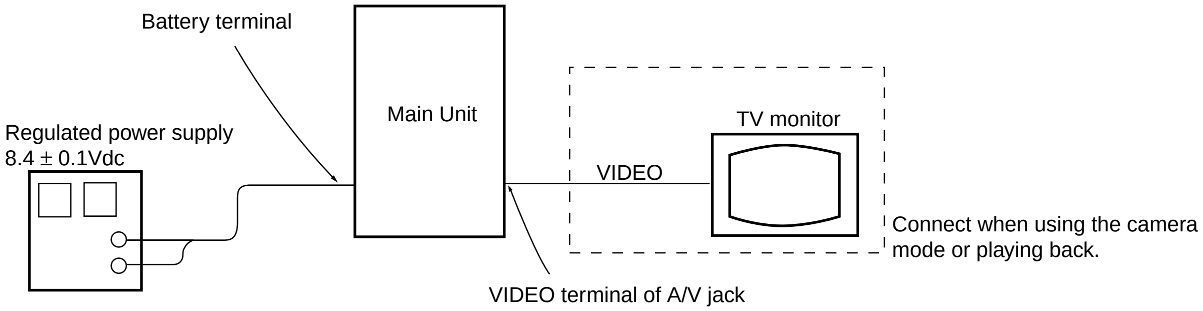

Battery terminal
Main Unit
TV monitor
Regulated power supply
8.4 ± 0.1Vdc
VIDEO
Connect when using the camera mode or playing back.
VIDEO terminal of A/V jack

Fig. 5-3-2

3-1-5. Alignment Tape

The following table lists alignment tapes which are available.
Use the tape specified in the signal column for each adjustment. If the type of tape to be used for checking operations is not specified, use whichever type.

Digital8 alignment tape

Name	Usage
SW/OL standard (WR5-2D)	Switching position adjustment
Audio operation check (WR5-3ND (NTSC), WR5-3CD (PAL))	Audio system adjustment
System operation check (WR5-5ND (NTSC), WR5-5CD (PAL))	Operation check

Hi8/standard 8 mm alignment tape

Name	Recording mode	Tape type	Tape speed	Usage
Tracking (WR5-1NP(NTSC), WR5-1CP(PAL))	Standard 8 mm	MP	SP	Tape path adjustment, Switching position adjustment
Video frequency characteristics (WR5-7NE(NTSC), WR5-7CE(PAL))	Hi8	ME	SP(NTSC) LP(PAL)	Frequency characteristics adjustment
Operation check (WR5-5NSP(NTSC), WR5-5CSP(PAL))	Standard 8 mm	MP	SP	Operation check
Operation check (WR5-8NSE(NTSC), WR5-8CSE(PAL))	Hi8	ME	SP	
Operation check (WR5-4NL(NTSC), WR5-4CL(PAL))	Standard 8 mm	MP	LP	
Operation check (WR5-8NLE(NTSC), WR5-8CLE(PAL)	Hi8	ME	LP	
AFM stereo operation check WR5-9NS(NTSC), WR5-9CS(PAL)	Standard 8 mm	MP	SP	AFM stereo Operation check
BPF adjustment WR5-11NS(NTSC), WR5-11CS(PAL)	Standard 8 mm	MP	SP	BPF adjustment

Tape type
ME .... Particle type metal tape
MP .... Evaporated type metal tape

Table 5-3-2

Fig. 5-3-3 Shows the color bar signals recorded on the alignment tape.

Note: Measure using the VIDEO terminal (Terminated at 75 Ω).

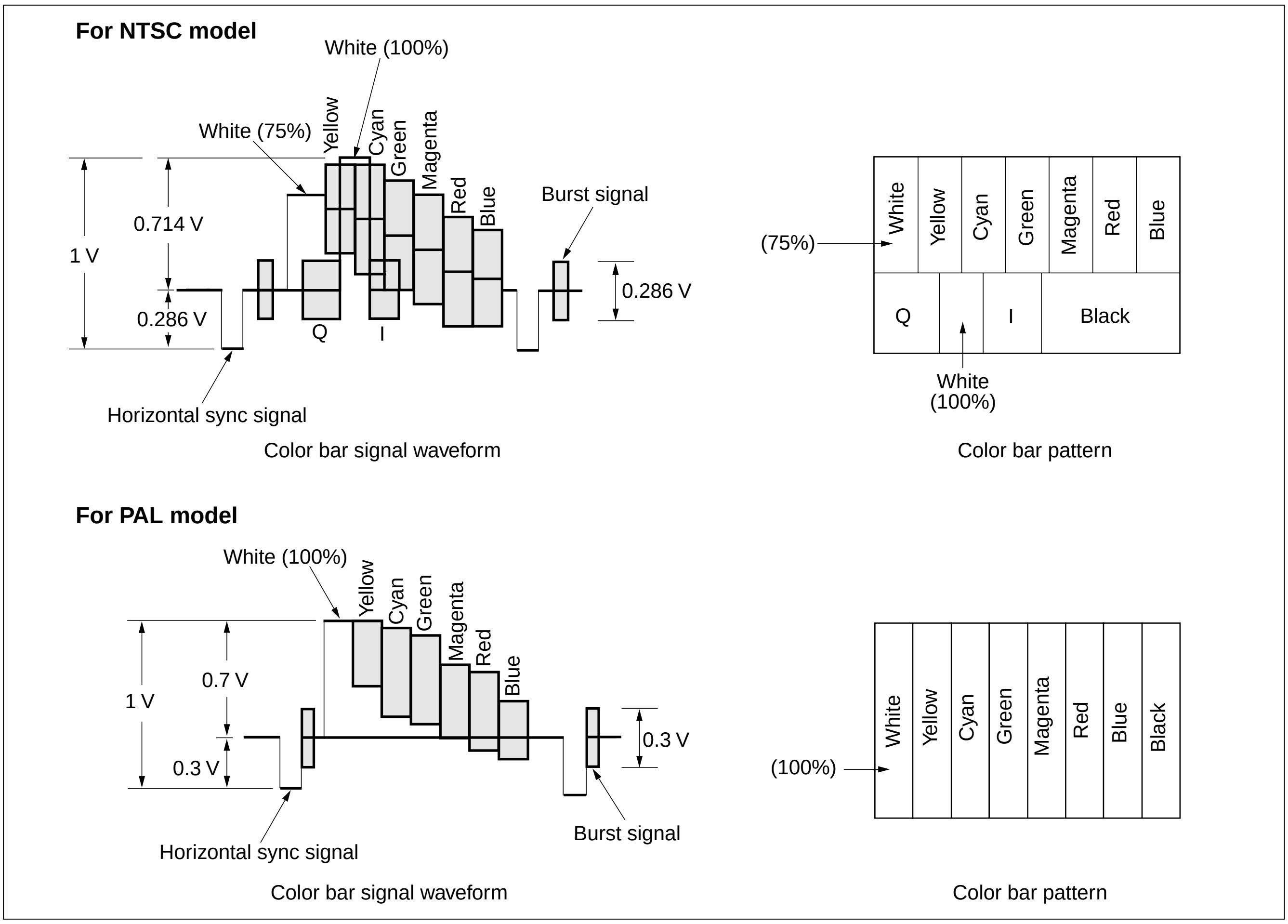

For NTSC model
White (100%)
White (75%)
Yellow
Cyan
Green
Magenta
Red
Blue
Burst signal
1 V
0.714 V
0.286 V
Q
I
0.286 V
Horizontal sync signal
Color bar signal waveform
(75%)
White
Yellow
Cyan
Green
Magenta
Red
Blue
Q
I
Black
White
(100%)
Color bar pattern
For PAL model
White (100%)
Yellow
Cyan
Green
Magenta
Red
Blue
1 V
0.7 V
0.3 V
0.3 V
Horizontal sync signal
Burst signal
Color bar signal waveform
(100%)
White
Yellow
Cyan
Green
Magenta
Red
Blue
Black
Color bar pattern

Fig. 5-3-3 Color Bar Signal of the Alignment Tape

3-1-6. Input/output Level and Impedance

Video input/output
  Phono jack, 1 Vp-p, 75 Ω, unbalanced, sync negative
S video input/output
  4-pin mini DIN
  Luminance signal:
    1 Vp-p, 75 Ω, unbalanced, sync negative
  Chrominance signal:
    0.286 Vp-p, 75 Ω, unbalanced (NTSC)
    0.300 Vp-p, 75 Ω, unbalanced (PAL)
Audio input/output
  Phono jack:
  Input: –7.5 dBs, input impedance more than 47 kΩ
  Output: –7.5 dBs, (at load impedance 47 kΩ), output impedance less than 2.2 kΩ

3-2. SYSTEM CONTROL SYSTEM ADJUSTMENT

1. Initialization of 7, 8, C, D, E, F Page Data

If the 7, 8, C, D, E, F page data is erased due to some reason, perform "1-2. INITIALIZATION OF 7, 8, C, D, E, F PAGE DATA", of "5-1. CAMERA SECTION ADJUSTMENT"

2. Node Unique ID No. Input

Note 1: Perform "2-2. Input of Serial No." if the data on page C has been cleared and the node unique ID No. is not found.

2-1. Input of Company ID

Write the company ID to the EEPROM (nonvolatile memory).

Page	C
Address	E8, E9, EA, EB, EC

Input method:

1) Select page: 0, address: 01, and set data: 01.
2) Enter the following data.

Note 2: Each time the data is set, press the PAUSE button on the adjusting remote commander.

Address	Data
E8	08
E9	00
EA	46
EB	01
EC	01

3) Select page: 0, address: 01, and set data: 00.

2-2. Input of Serial No.

Write the serial No. and model code to the EEPROM (nonvolatile memory).
In writing the serial No., a decimal number should be converted into a hexadecimal number.

Page	C
Address	ED, EE, EF

1) Select page: 0, address: 01, and set data: 01.
2) Read the serial No. from the model name label, and it is assumed to be D_1.
   Example: If serial No. is "77881",
   $D_1 = 77881$
3) From Table 5-3-3, obtain D_2 and H1 that correspond to D_1.
   Example: If $D_1 = 77881$,
   $D_2 = D_1 - 65536 = 12345$
   $H_1 = 00$

D_1 (decimal)	D_2 (decimal) (Service model code)	H_1 (hexadecimal)
00001 to 65535	D_1	00
65536 to 131071	$D_1 - 65536$	00
131072 to196607	$D_1 - 131072$	00
196608 to 262143	$D_1 - 196608$	00

Table 5-3-3

4) Enter H_1 to address: ED on page: C.
   Example: If $H_1 = 00$,
   select page: C, address: ED, and set data: 00, then press the PAUSE button.
5) From Table 5-3-4, obtain the maximum decimal number less than D_2, and it is assumed to be D_3.
   Example: If $D_2 = 12345$.
   $D_3 = 12288$
6) From Table 5-3-4, obtain a hexadecimal number that corresponds to D_3, and it is assumed to be H_3.
   Example: If $D_3 = 12288$,
   $H_3 = 3000$
7) Caluculate D_4 using following equations (decimal caluculation). $(0 \leqq D_4 \leqq 225)$
   $D_4 = D_2 - D_3$
   Example: If $D_2 = 12345$ and $D_3 = 12288$,
   $D_4 = 12345 - 12288 = 57$
8) Convert D_4 into a hexadecimal number to obtain H_4. (See Table 5-4-1 "Hexadecimal - decimal conversion table" in 5-4. Service Mode)
   Example: If $D_4 = 57$,
   $H_4 = 39$
9) Enter higher two digits of H_3 to address: EE on page: C.
   Example: If $H_3 = 3000$,
   select page: C, address: EE, and set data: 30, then press the PAUSE button.
10) Enter H_4 to address: EF on page: C.
    Example: If $H_4 = 39$,
    select page: C, address: EF, and set data: 39, then press the PAUSE button.
11) Select page: 0, address: 01, and set data: 00.

D_3	H_3	D_3	H_3	D_3	H_3	D_3	H_3	D_3	H_3	D_3	H_3	D_3	H_3	D_3	H_3
0	0000	8192	2000	16384	4000	24576	6000	32768	8000	40960	A000	49152	C000	57344	E000
256	0100	8448	2100	16640	4100	24832	6100	33024	8100	41216	A100	49408	C100	57600	E100
512	0200	8704	2200	16896	4200	25088	6200	33280	8200	41472	A200	49664	C200	57856	E200
768	0300	8960	2300	17152	4300	25344	6300	33536	8300	41728	A300	49920	C300	58112	E300
1024	0400	9216	2400	17408	4400	25600	6400	33792	8400	41984	A400	50176	C400	58368	E400
1280	0500	9472	2500	17664	4500	25856	6500	34048	8500	42240	A500	50432	C500	58624	E500
1536	0600	9728	2600	17920	4600	26112	6600	34304	8600	42496	A600	50688	C600	58880	E600
1792	0700	9984	2700	18176	4700	26368	6700	34560	8700	42752	A700	50944	C700	59136	E700
2048	0800	10240	2800	18432	4800	26624	6800	34816	8800	43008	A800	51200	C800	59392	E800
2304	0900	10496	2900	18688	4900	26880	6900	35072	8900	43264	A900	51456	C900	59648	E900
2560	0A00	10752	2A00	18944	4A00	27136	6A00	35328	8A00	43520	AA00	51712	CA00	59904	EA00
2816	0B00	11008	2B00	19200	4B00	27392	6B00	35584	8B00	43776	AB00	51968	CB00	60160	EB00
3072	0C00	11264	2C00	19456	4C00	27648	6C00	35840	8C00	44032	AC00	52224	CC00	60416	EC00
3328	0D00	11520	2D00	19712	4D00	27904	6D00	36096	8D00	44288	AD00	52480	CD00	60672	ED00
3584	0E00	11776	2E00	19968	4E00	28160	6E00	36352	8E00	44544	AE00	52736	CE00	60928	EE00
3840	0F00	12032	2F00	20224	4F00	28416	6F00	36608	8F00	44800	AF00	52992	CF00	61184	EF00
4096	1000	12288	3000	20480	5000	28672	7000	36864	9000	45056	B000	53248	D000	61440	F000
4352	1100	12544	3100	20736	5100	28928	7100	37120	9100	45312	B100	53504	D100	61696	F100
4608	1200	12800	3200	20992	5200	29184	7200	37376	9200	45568	B200	53760	D200	61952	F200
4864	1300	13056	3300	21248	5300	29440	7300	37632	9300	45824	B300	54016	D300	62208	F300
5120	1400	13312	3400	21504	5400	29696	7400	37888	9400	46080	B400	54272	D400	62464	F400
5376	1500	13568	3500	21760	5500	29952	7500	38144	9500	46336	B500	54528	D500	62720	F500
5632	1600	13824	3600	22016	5600	30208	7600	38400	9600	46592	B600	54784	D600	62976	F600
5888	1700	14080	3700	22272	5700	30464	7700	38656	9700	46848	B700	55040	D700	63232	F700
6144	1800	14336	3800	22528	5800	30720	7800	38912	9800	47104	B800	55296	D800	63488	F800
6400	1900	14592	3900	22784	5900	30976	7900	39168	9900	47360	B900	55552	D900	63744	F900
6656	1A00	14848	3A00	23040	5A00	31232	7A00	39424	9A00	47616	BA00	55808	DA00	64000	FA00
6912	1B00	15104	3B00	23296	5B00	31488	7B00	39680	9B00	47872	BB00	56064	DB00	64256	FB00
7168	1C00	15360	3C00	23552	5C00	31744	7C00	39936	9C00	48128	BC00	56320	DC00	64512	FC00
7424	1D00	15616	3D00	23808	5D00	32000	7D00	40192	9D00	48384	BD00	56576	DD00	64768	FD00
7680	1E00	15872	3E00	24064	5E00	32256	7E00	40448	9E00	48640	BE00	56832	DE00	65024	FE00
7936	1F00	16128	3F00	24320	5F00	32512	7F00	40704	9F00	48896	BF00	57088	DF00	65280	FF00

Note: D_3: Decimal
H_3: Hexadecimal

Table 5-3-4

3. Battery End Adjustment (VC-235 board)

Set the battery end voltage.
If the voltage is incorrect, the life of the battery will shorten.
The image at the battery end will also be rough.

Mode	Camera recording
Subject	Arbitrary
Measurement Point	LCD display of the adjustment remote commander
Measuring Instrument	
Adjustment Page	D
Adjustment Address	48, 49

Note 1: The lens block and cabinet (R) must be connected.

Switch setting

1) AUTO FOCUS .... OFF
2) LCD screen (TRV model) .... Closed
3) NIGHT SHOT .... OFF

   Note 2: TRV model: DCR-TRV120/TRV120E/TRV120P/TRV125E

Connection:

1) Connect the regulated power supply and the digital voltmeter to the battery terminal as shown in Fig. 5-3-4.

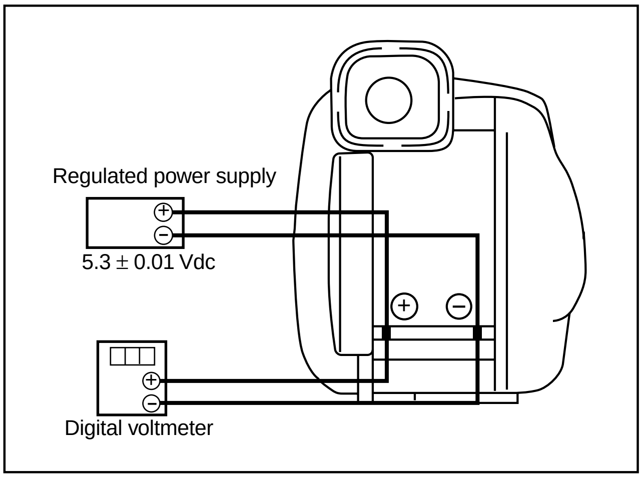


Fig. 5-3-4

Adjusting method:

1) Adjust the output voltage of the regulated power supply so that the digital voltmeter display is 6.1 ± 0.1 Vdc.
2) Turn off the power supply.
3) Turn on the HOLD switch of the adjustment remote commander.
4) Turn on the power supply.
5) Load a cassette, and set to the camera recording mode.
6) Select page: 0, address: 01, and set data: 01.
7) Decrease the output voltage of the regulated power supply so that the digital voltmeter display is 5.30 ± 0.01 Vdc.
8) Select page: 2, address: 5D, read the data, and this data is named Dref.
9) Select page: D, address: 48, set data: Dref, and press the PAUSE button of the adjustment remote commander.
10) Convert Dref to decimal notation, and obtain Dref'. (Refer to Table 5-4-1 "Hexadecimal-decimal conversion table" of "5-4. Service Mode")
11) Calculate D_{49}' using following equations (decimal calculation), convert it to a hexdecimal number, and obtain D_{49}.
    D_{49}'=Dref'+8
12) Select page: D, address: 49, set data D_{49}, and then press the PAUSE button of adjustment remote commander.
13) Select page: 0, address: 01, and set data: 00.

3-3. SERVO AND RF SYSTEM ADJUSTMENTS

Before perform the servo and RF system adjustments, check that the specified value of “27 MHz/36MHz Origin Oscillation Adjustment” of “3-4. VIDEO SYSTEM ADJUSTMENT” is satisfied.

Adjusting Procedure:

1. REEL FG adjustment
2. PLL f_0 & LPF f_0 Pre-adjustment
3. Switching position adjustment
4. AGC center level adjustment
5. APC & AEQ adjustment
6. PLL f_0 & LPF f_0 final adjustment
7. Hi8/standard 8 mm switching position adjustment
8. CAP FG offset adjustment

1. REEL FG Adjustment (VC-235 board)

Mode	VTR stop
Measurement Point	Display data of page: 3, address: 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	17, 30
Specified Value	Bit values of bit 1 and bit 3 are “0”

Adjusting method:

1) Close the cassette compartment without loading a cassette and complete loading.
2) Select page: 0, address: 01, and set data: 01.
3) Select page: 3, address: 01, set data: 1C, and press the PAUSE button of the adjustment remote commander.
4) Select page: 3, address: 02, and check that the data changes to “00”.
5) Select page: 3, address: 03, and check that bit values of bit 1 and bit 3 are “0”.
   If bit value of bit 1 and bit 3 is “1”, there are errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)

Bit value of page: 3, address: 03	Error contents
bit 3 = 1	S REEL is defective
bit 1 = 1	T REEL is defective

6) Select page: 0, address: 01, and set data: 00.

2. PLL f_0 & LPF f_0 Pre-adjustment (VC-235 board)

Mode	VTR stop
Measurement Point	Display data of page: 3, address: 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	1F, 20, 22, 29
Specified Value	Bit values of bit 2, bit 3 and bit 6 are “0”

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 30, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 02, and check that the data changes to “00”.
4) Select page: 3, address: 03, and check that bit values of bit2, bit3 and bit6 are “0”.
   If bit value of bit 2, bit 3 or bit 6 is “1”, there are errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)

Bit value of page: 3, address: 03	Error contents
bit 6 = 1	LPF f_0 adjustment is defective
bit 3 = 1	PLL f_0, fine adjustment is defective
bit 2 = 1	PLL f_0, fine adjustment is defective

If bit value of bit 2 or bit 3 is “1”, select page: C, address: 21, set the following data, and press the PAUSE button, and repeat steps 2) to 4).

	Setting data
When the data of page: C, address: 21 is “CA”	CE
When the data of page: C, address: 21 is “CE”	C6
When the data of page: C, address: 21 is “C6”	D2
When the data of page: C, address: 21 is “D2”	C2

5) Select page: 0, address: 01, and set data: 00.

3. Switching Position Adjustment (VC-235 board)

To obtain normal playback waveform output, adjust the switching position.

Mode	VTR playback
Signal	Digital8 alignment tape : SW/OL standard (WR5-2D)
Measurement Point	Display data of page: 3, address: 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	10, 11, 12, 13
Specified Value	00

Adjusting method:

1) Insert the Digital8 SW/OL reference tape and enter the VTR STOP mode.
2) Select page: 0, address: 01, and set data: 01.
3) Select page: 3, address: 21, and check that the data is “02”.
   Note: If the data of page: 3, address: 21 is other than “72”, the tape top being played. After playing the tape for 1 to 2 seconds, perform step 4) and higher.
   If the data of page: 3, address: 21 is other than “62”, the tape end being played. After rewind the tape, perform step 4) and higher.
4) Select page: 3, address: 01, set data: 0D, and press the PAUSE button of the adjustment remote commander.
5) Select page: 3, address: 02, wait data for stable condition as “00”.
6) Select page: 3, address: 03, and check that the data is “00”.
   Note: If bit 0 of page: 3, address: 03 data is “1”, the A channel is defective. If bit 1 is “1”, the B channel is defective. Contents of the defect is written into page: C, addresses: 10 and 12. See the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)
7) Select page: 0, address: 01, and set data: 00.

When the A channel is defective

Data of page: C, address: 10	Contents of defect
EE	Writing into EEPROM (IC4502) is defective
E8	Adjustment data is out of range
E7	No data is returned from IC3301 (CAIN)

When the B channel is defective

Data of page: C, address: 12	Contents of defect
E8	Adjustment data is out of range
E7	No data is returned from IC3301 (CAIN)

4. AGC Center Level Adjustment (VC-235 board)

Mode	Camera record and playback
Subject	Arbitrary
Measurement Point	Pin ⑯ of CN1108 (RF MON) (Note 1) External trigger : Pin ⑬ of CN1108 (DV RF SWP)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	1E
Specified Value	The display data of page: 3, address: 03 is “00”

Note 1: Connect a 75 Ω resistor between Pin ⑯ and Pin ⑥ (GND) of CN1108.
75 Ω resistor (Parts code: 1-247-804-11)

Note 2: Use a Hi8 MP tape.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 8, address: 2A, set data: C8, and press the PAUSE button of the adjustment remote commander.
3) Record the camera signal for a minute.
4) Select page: 2, address: 2E, and set data: 01.
5) Playback the recorded segment.
6) Select page: 3, address: 33, and set data: 08.
7) Confirm that the playback RF signal is stable.
8) Select page: 3, address: 01, set data: 23, and press the PAUSE button.
9) Select page: 3, address: 02, and check that the data is “00”.
10) Select page: 3, address: 03, and check that the data is “00”.
    Note 3: If the data of page: 3, address: 03 is other than “00”, adjustment has errors.
11) Select page: 3, address: 33, and set data: 00.
12) Select page: 2, address: 2E, and set data: 00.
13) Select page: 8, address: 2A, set data: 00, and press the PAUSE button.
14) Select page: 0, address: 01, and set data: 00.

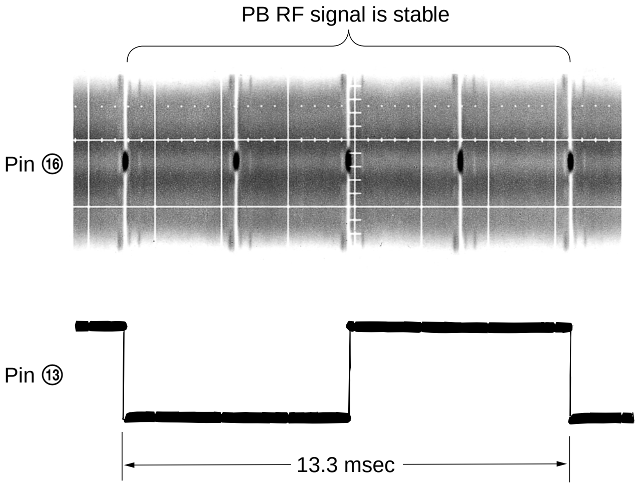


Fig. 5-3-5

5. APC & AEQ Adjustment (VC-235 board)

Mode	Camera record and playback
Subject	Arbitrary
Measurement Point	Pin ⑯ of CN1108 (RF MON) (Note 1) External trigger : Pin ⑬ of CN1108 (DV RF SWP)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	18, 19, 1B, 1C, 21, 2C
Specified Value	The display data of page: 3, address: 03 is “00”

Note 1: Connect a 75 Ω resistor between Pin ⑯ and Pin ⑥ (GND) of CN1108.
75 Ω resistor (Parts code: 1-247-804-11)

Note 2: Use a Hi8 MP tape.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 8, address: 2A, set data: C8, and press the PAUSE button of the adjustment remote commander.
3) Record the camera signal for a minute.
4) Select page: 2, address: 2E, and set data: 01.
5) Playback the recorded segment.
6) Select page: 3, address: 33, and set data: 08.
7) Confirm that the playback RF signal is stable.
8) Select page: 3, address: 01, set data: 07, and press the PAUSE button.
9) Select page: 3, address: 02, and check that the data changes from “07” to “00” in about 20 seconds after pressing the PAUSE button.
10) Select page: 3, address: 03, and check that the data is “00”.
    Note 3: If the data of page: 3, address: 03 is other than “00”, adjustment has errors.
11) Select page: 3, address: 33, and set data: 00.
12) Select page: 2, address: 2E, and set data: 00.
13) Select page: 8, address: 2A, set data: 00, and press the PAUSE button.
14) Select page: 0, address: 01, and set data: 00.

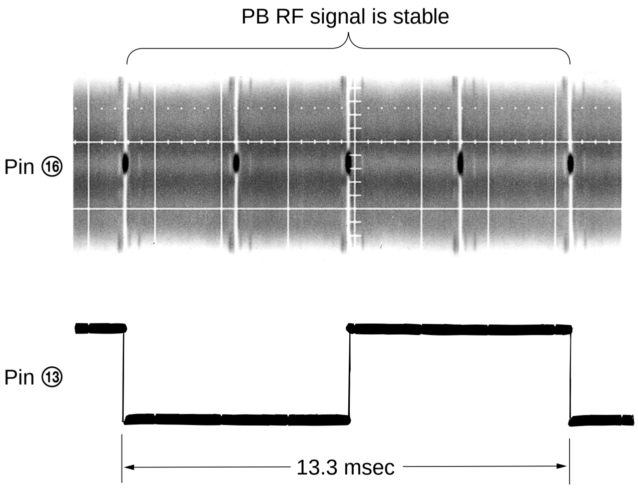


Fig. 5-3-6

6. PLL f_0 & LPF f_0 Final Adjustment (VC-235 board)

Mode	VTR stop
Signal	Arbitrary
Measurement Point	Display data of page: 3, address: 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	1F, 20, 22, 29
Specified Value	Bit values of bit2, bit3 and bit6 are “0”

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 30, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 02, and check that the data changes to “00”.
4) Select page: 3, address: 03, and check that bit values of bit2, bit3 and bit6 are “0”.
   Note: If bit value of bit 2, bit 3 or bit 6 is “1”, there are errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)

Bit value of page: 3, address: 03	Error contents
bit 6 = 1	LPF f_0 adjustment is defective
bit 3 = 1	PLL f_0, fine adjustment is defective
bit 2 = 1	PLL f_0, fine adjustment is defective

5) Select page: 0, address: 01, and set data: 00.

7. Hi8/standard 8 mm Switching Position Adjustment (VC-235 board)

If deviated in this case causes switching noise or jitter on the Hi8/standard 8 mm mode played back screen.

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape: For tracking adjustment (WR5-1NP(NTSC)) (WR5-1CP(PAL))
Measurement Point	CH1: Pin ⑧ of CN1108 (VC RF SWP) CH2: Pin ⑤ of CN1108 (PB RF)
Measuring Instrument	Oscilloscope
Adjustment Page	F
Adjustment Address	62, 63
Specified Value	t1=0 ± 10 μsec

Adjusting Method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: F, address: 22, set data: C0, and press the PAUSE button of the adjustment remote commander.
3) Select page: 2, address: 2E, and set data: 02.
4) Set to the playback mode.
5) Select page: F, address: 62, change the data and minimize "t1", and then press the PAUSE button. (Coarse adjustment)
6) Select page: F, address: 63, change the data and adjust so that the switching position (t1) becomes the specified value. (Fine adjustment)
7) Press the PAUSE button.
8) Select page: F, address: 22, set data: 80, and press the PAUSE button.
9) Select page: 2, address: 2E, and set data: 00.
10) Select page: 0, address: 01, and set data: 00.

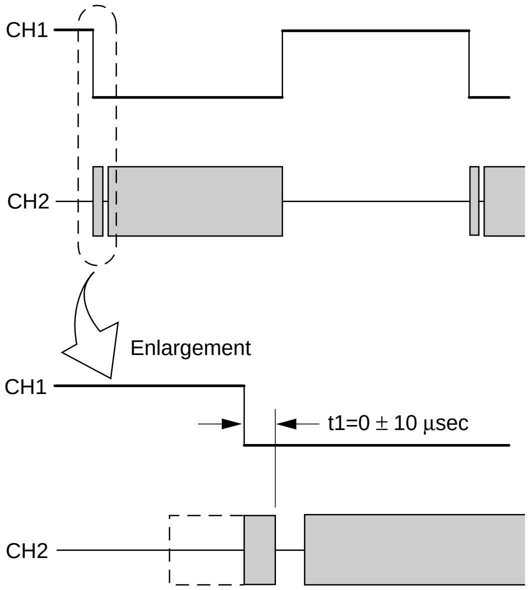


Fig. 5-3-7

8. CAP FG Duty Adjustment (VC-235 board)

Improve the capstan servo characteristic. If it is not correct. jitters will increase.

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape: For checking operation (WR5-5NSP(NTSC)) (WR5-5CSP(PAL))
Measurement Point	Pin ⑮ of CN1108 (CAP FG)
Measuring Instrument	Oscilloscope
Adjustment Page	F
Adjustment Address	64
Specified value	Duty=50 ± 1%

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 2, address: 2E, and set data: 02.
3) Set to the playback mode.
4) Select page: 6, address: 01, set data: 81, and press the PAUSE button of the adjustment remote commander. (to start up automatic CAP FG offset adjustment.)
5) Select page: 6, address: 02, and check that the data is "01".
6) Check that Duty of CAP FG signal satisfies the specified value. If not, select page: 6, address: 01, set data: 00, and press the PAUSE button, and then, repeat steps 4) to 6).
7) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
8) Select page: 2, address: 2E, and set data: 00.
9) Select page: 0, address: 01, and set data: 00.

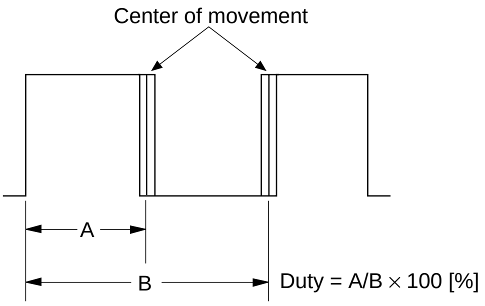


Fig. 5-3-8

3-4. VIDEO SYSTEM ADJUSTMENTS

3-4-1. Video System Adjustments

Adjusting Procedure:

1. 27 MHz/36 MHz origin oscillation adjustment
2. Chroma BPF f_0 adjustment
3. S VIDEO OUT Y Level Adjustment
4. S VIDEO OUT chroma level adjustment
5. VIDEO OUT Y, chroma level check
6. Hi8/standard 8 mm AFC f_0 adjustment

1. 27 MHz/36 MHz Origin Oscillation Adjustment (VC-235 board)

Set the oscillation frequency of X1501.
If deviated, the synchronization will be disrupted and the color will become inconsistent.

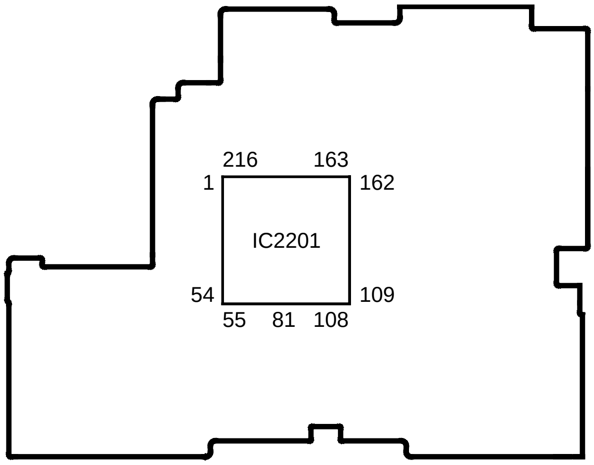
Note: 27 MHz .... 720H model
36 MHz .... 960H model
720H model: DCR-TRV120/TRV120P
960H model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

Mode	Camera
Measurement Point	Pin (81) of IC2201
Measuring Instrument	Frequency counter
Adjustment Page	F
Adjustment Address	4D
Specified Value	f=13500000 ± 68 Hz

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: F, address: 4D, change the data and set the clock frequency(f) to the specified value.
3) Press the PAUSE button of the adjustment remote commander.
4) Select page: 0, address: 01, and set data: 00.

VC-235 BOARD



2. Chroma BPF f_0 Adjustment (VC-235 board)

Set the center frequency of IC3701 chroma band-pass filter.

Mode	VTR stop
Signal	No signal
Measurement Point	CH1: Chroma signal terminal of S VIDEO jack (75 Ω terminated) CH2: Y signal terminal of S VIDEO jack (75 Ω terminated)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	28
Specified Value	A = 100 mVp-p or less B = 200 mVp-p or more

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
3) Check that the burst signal (B) is output to the chroma signal terminal of S VIDEO jack.
4) Select page: 3, address: 0C, set data: 04, and press the PAUSE button.
5) Select page: C, address: 28, and change the data for minimum amplitude of the burst signal level (A).
(The data of address: 28, should be "00" to "07")
6) Press the PAUSE button.
7) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
8) Check that the burst signal level (B) satisfies the specified value.
9) Select page: D, address: 11, set data: 00, and press the PAUSE button.
10) Select page: 0, address: 01, and set data: 00.

When the data of page: 3, address: 0C, is 04:

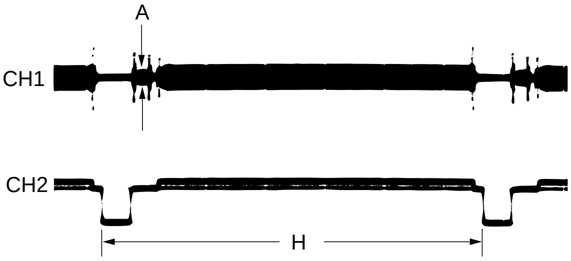


Fig. 5-3-9

When the data of page: 3, address: 0C, is 00:

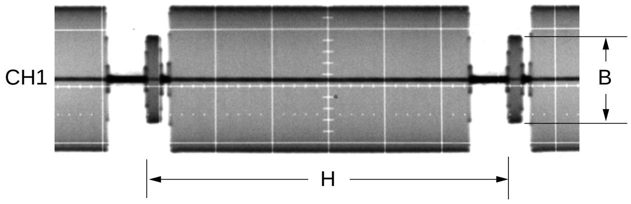


Fig. 5-3-10

3. S VIDEO OUT Y Level Adjustment (VC-235 board)

Mode	VTR stop
Subject	Arbitrary
Measurement Point	Y signal terminal of S VIDEO jack (75 Ω terminated)
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	25
Specified Value	A = 1000 ± 20 mV

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 0C, set data: 02, and press the PAUSE button.
4) Select page: C, address: 25, change the data and set the Y signal level (A) to the specified value.
5) Press the PAUSE button.
6) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
7) Select page: D, address: 11, set data: 00, and press the PAUSE button.
8) Select page: 0, address: 01, and set data: 00.

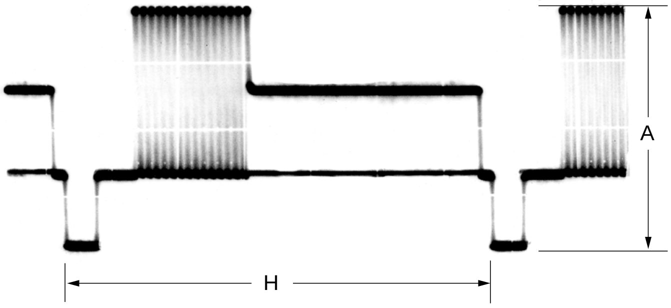


Fig. 5-3-11

4. S VIDEO OUT Chroma Level Adjustment (VC-235 board)

Mode	VTR stop
Subject	Arbitrary
Measurement Point	Chroma signal terminal of S VIDEO jack (75 Ω terminated) External trigger: Y signal terminal of S VIDEO jack
Measuring Instrument	Oscilloscope
Adjustment Page	C
Adjustment Address	26, 27
Specified Value	Cr level: A=714 ± 14 mV (NTSC) A=700 ± 14 mV (PAL) Cb level: B=714 ± 14 mV (NTSC) B=700 ± 14 mV (PAL) Burst level: C=286 ± 6 mV (NTSC) C=300 ± 6 mV (PAL)

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 0C, set data: 02, and press the PAUSE button.
4) Select page: C, address: 26, change the data and set the Cr signal level (A) to the specified value.
5) Press the PAUSE button.
6) Select page: C, address: 27, change the data and set the Cb signal level (B) to the specified value.
7) Press the PAUSE button.
8) Check that the burst signal level (C) is satisfied the specified value.
9) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
10) Select page: D, address: 11, set data: 00, and press the PAUSE button.
11) Select page: 0, address: 01, and set data: 00.

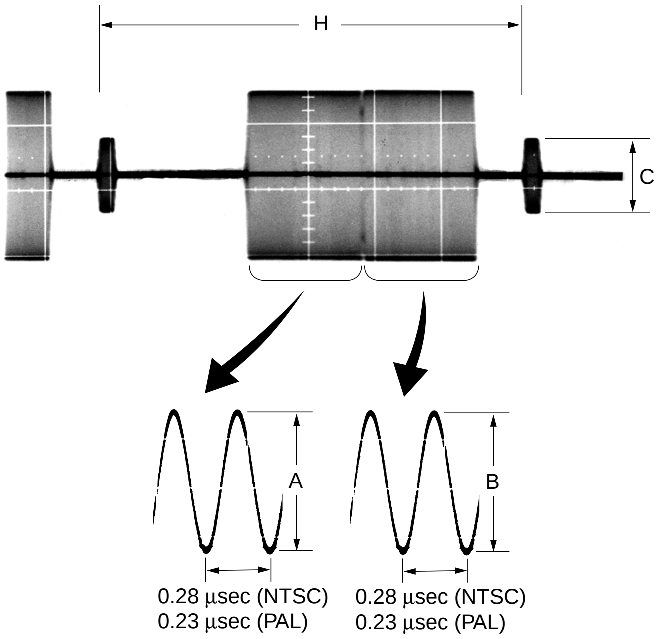


Fig. 5-3-12

5. VIDEO OUT Y, Chroma Level Check (VC-235 board)

Mode	VTR stop
Subject	Arbitrary
Measurement Point	VIDEO jack (75 Ω terminated)
Measuring Instrument	Oscilloscope
Specified Value	Sync level: A=286 ± 18 mV (NTSC) A=307 ± 18 mV (PAL) Burst level: B=286 ± 18 mV (NTSC) B=300 ± 18 mV (PAL)

Adjusting method:

1) Select page: 0, address: 01, set data: 01.
2) Select page: D, address: 11, set data: 10, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 0C, set data: 02, and press the PAUSE button.
4) Check that the sync signal level (A) satisfies the specified value.
5) Check that the burst signal level (B) satisfies the specified value.
6) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
7) Select page: D, address: 11, set data: 00, and press the PAUSE button.
8) Select page: 0, address: 01, set data: 00.

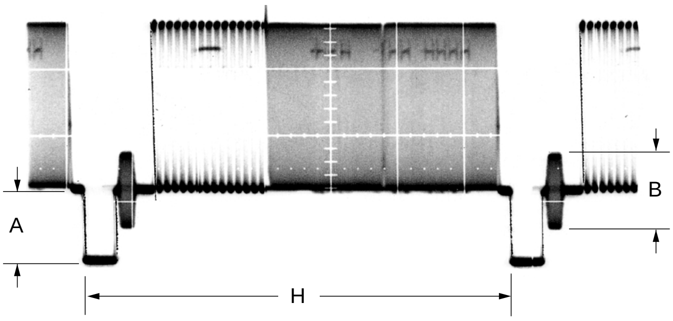


Fig. 5-3-13

6. Hi8/standard 8 mm AFC f_0 Adjustment (VC-235 board) (Using Digital Voltmeter)

Adjust the pull-in range of the clock generator (IC2201) for A/D conversion during Hi8/standard 8 mm playback.

Mode	VTR stop
Signal	No signal
Measurement Point	Pin ② of CN1108 (AFC f0)
Measuring Instrument	Digital voltmeter
Adjustment Page	F
Adjustment Address	65
Specified Value	A=2.00 ± 0.05 Vdc

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 0D, set data: 04, and press the PAUSE button of the adjustment remote commander.
3) Select page: 6, address: 63, set data: 04.
4) Select page: 6, address: 6F, set data: 01.
5) Select page: F, address: 65, change the data and set the DC voltage (A) to the specified value.
6) Press the PAUSE button.
7) Select page: 3, address: 0D, set data: 00, and press the PAUSE button.
8) Select page: 6, address: 63, set data: 00.
9) Select page: 6, address: 6F, set data: 00.
10) Select page: 0, address: 01, and set data: 00.

7. Hi8/standard 8 mm AFC f_0 Adjustment (VC-235 board) (Auto Adjustment)

Adjust the pull-in range of the clock generator (IC2201) for A/D conversion during Hi8/standard 8 mm playback.

Mode	VTR stop
Signal	No signal
Measurement Point	Display data of Page: 6, Address: 6E
Measuring Instrument	Adjustment remote commander
Adjustment Page	F
Adjustment Address	65
Specified Value	B2 to BA

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 0D, set data: 04, and press the PAUSE button of the adjustment remote commander.
3) Select page: 6, address: 63, set data: 04.
4) Select page: 6, address: 6F, set data: 01.
5) Select page: 6, address: 01, set data: C5, and press the PAUSE button.
6) Select page: 6, address: 02, and check that the data is “01”.
7) Select page: 6, address: 6E, and check that the display data satisfies the specified value.
8) Select page: 3, address: 0D, set data: 00, and press the PAUSE button.
9) Select page: 6, address: 01, set data: 00, and press the PAUSE button.
10) Select page: 6, address: 63, set data: 00.
11) Select page: 6, address: 6F, set data: 00.
12) Select page: 0, address: 01, and set data: 00.

3-5. IR TRANSMITTER ADJUSTMENTS

Adjust using a IR receiver jig (J-6082-383-A).

Switch setting:
LASER LINK .... ON (Red LED is lit)

1. IR Video Carrier Frequency Adjustment (MI-37 board)

Mode	VTR stop
Signal	No signal
Measurement Point	Pin ⑤ of CN003 of IR receiver jig (RF)
Measuring Instrument	Frequency counter
Adjustment Page	F
Adjustment Address	80
Specified Value	f=11.85 ± 0.05 MHz (NTSC model) f=11.55 ± 0.05 MHz (PAL model)

Note: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E/TR8000E/TR8100E

Connection of Equipment
Connect the measuring device as shown in the following figure, and adjust.

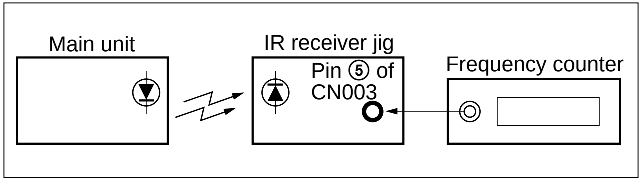


Fig. 5-3-14

Adjusting method:
1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 0C, set data: 08, and press the PAUSE button of the adjustment remote commander.
3) Select page: F, address: 80, change the data, and set the video carrier frequency (f) to the specified value.
4) Press the PAUSE button.
5) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
6) Select page: 0, address: 01, and set data: 00.

2. IR Video Deviation Adjustment (MI-37 board)

Mode	VTR stop
Signal	No signal
Measurement Point	VIDEO OUT terminal of IR receiver jig (Terminated at 75 Ω)
Measuring Instrument	Oscilloscope
Adjustment Page	F
Adjustment Address	7E
Specified Value	A=0.82 ± 0.05 V

Connection of Equipment
Connect the measuring device as shown in the following figure, and adjust.

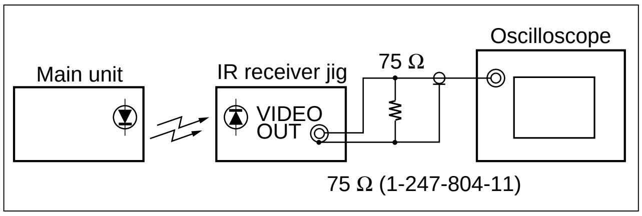


Fig. 5-3-15

Adjusting method:
1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 0C, set data: 01, and press the PAUSE button of the adjustment remote commander.
3) Select page: F, address: 7E, and change the data, set the video signal amplitude (A) to the specified value.
4) Press the PAUSE button.
5) Select page: 3, address: 0C, set data: 00, and press the PAUSE button.
6) Select page: 0, address: 01, and set data: 00.

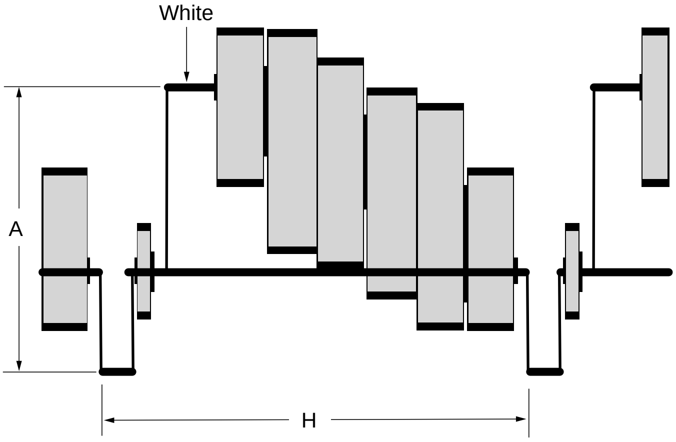


Fig. 5-3-16

3. IR Audio Deviation Adjustment (MI-37 board)

Mode	VTR stop
Signal	Audio signal: 400 Hz, –7.5 dBs: Audio left and right terminal of A/V jack Video signal: Color bar signal: VIDEO terminal of A/V jack
Measurement Point	AUDIO L terminal and AUDIO R terminal of IR receiver jig (Terminated at 47 kΩ)
Measuring Instrument	Audio level meter
Adjustment Page	F
Adjustment Address	7F
Specified Value	Signal level: –7.5 ± 1.0 dBs Level difference of L and R: Below 2 dB

Note: TR model: DCR-TR8000E/TR8100E

Connection of Equipment

Connect the measuring device as shown in the following figure, and adjust.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Only for the TR model (Note), Select page: D, address: 20, set data: 01, and press the PAUSE button of the adjustment remote commander.
3) Connect the audio level meter to the AUDIO L terminal of the IR receiver jig.
4) Select page: F, address: 7F, change the data and set the 400 Hz audio signal level to the specified value.
5) Press the PAUSE button.
6) Connect the audio level meter to the AUDIO R terminal of the IR receiver jig.
7) Check that the 400 Hz audio signal level is within the specified value. If outside, repeat from step 3).
8) Only for the TR model (Note), Select page: D, address: 20, set data: 00, and press the PAUSE button.
9) Select page: 0, address: 01, and set data: 00.

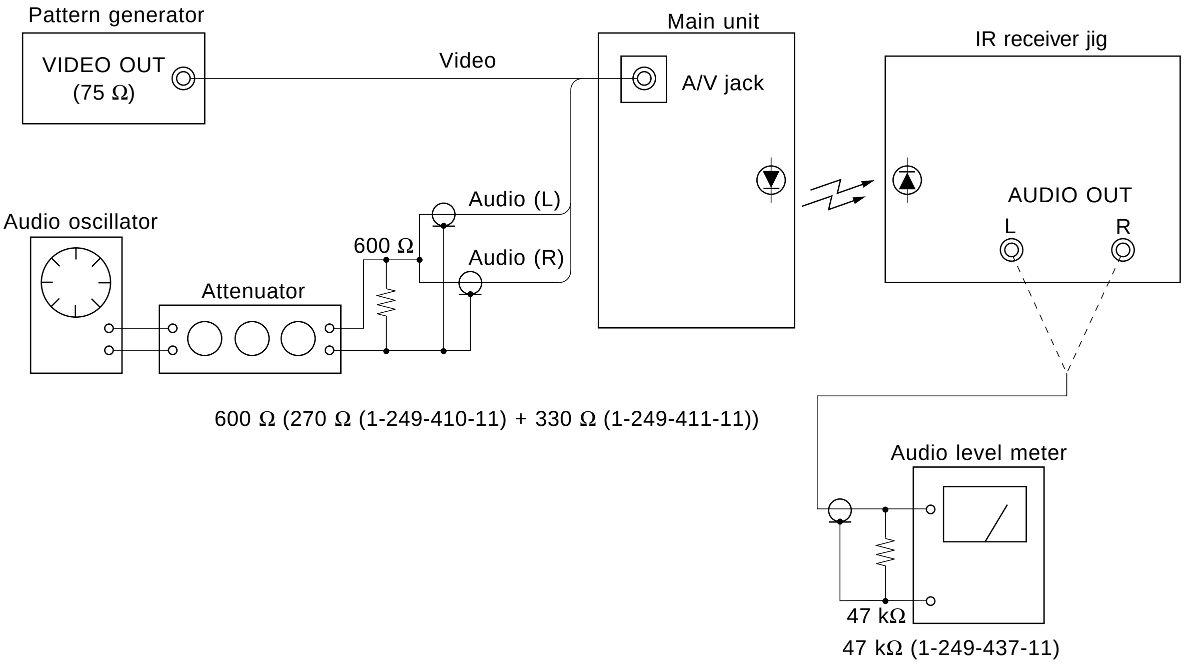

Pattern generator
VIDEO OUT
(75 Ω)
Video
Main unit
A/V jack
IR receiver jig
Audio (L)
Audio (R)
AUDIO OUT
L
R
Audio oscillator
600 Ω
Attenuator
600 Ω (270 Ω (1-249-410-11) + 330 Ω (1-249-411-11))
Audio level meter
47 kΩ
47 kΩ (1-249-437-11)

Fig. 5-3-17

3-6. AUDIO SYSTEM ADJUSTMENTS

[Connecting the measuring instruments for the audio]

Connect the audio system measuring instruments in addition to the video system measuring instruments as shown in Fig. 5-3-22.

[Adjustment Procedure]

1) Hi8/standard 8 mm AFM BPF f_0 adjustment
2) Hi8/standard 8 mm AFM 1.5 MHz deviation adjustment
3) Hi8/standard 8 mm AFM 1.7 MHz deviation adjustment
4) Digital8 playback level check
5) Overall level characteristics check
6) Overall distortion check
7) Overall noise level check
8) Overall separation check

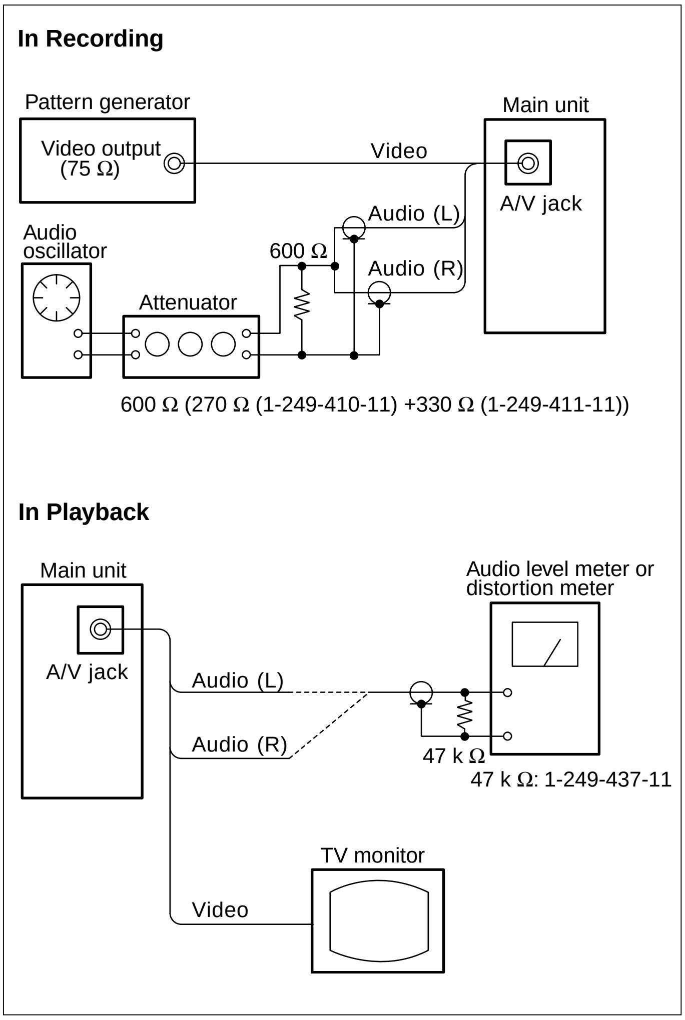

In Recording
Pattern generator
Video output
(75 Ω)
Video
Main unit
A/V jack
Audio (L)
Audio (R)
Audio
oscillator
600 Ω
Attenuator
600 Ω (270 Ω (1-249-410-11) +330 Ω (1-249-411-11))
In Playback
Main unit
A/V jack
Audio level meter or
distortion meter
Audio (L)
Audio (R)
47 k Ω
47 k Ω: 1-249-437-11
TV monitor
Video

Fig. 5-3-18

1. Hi8/standard 8 mm AFM BPF f_0 Adjustment (VC-235 board)

Sets the BPF passing frequency of IC5701 so that the AFM signal can separate from the playback RF signal properly. If deviated. the mono/stereo mode will be differentiated incorrectly, and noises and distortions will increase during high volume playback.

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape: For BPF adjustment (WR5-11NS (NTSC)) (WR5-11CS (PAL))
Measurement Point	Audio left or right terminal of A/V jack
Measuring Instrument	Distortion meter
Adjustment Page	F
Adjustment Address	7D
Specified Value	The Main and Sub channel distortion rate should be almost the same (within ± 1%) and minimum.

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Set the Hi-Fi sound switch (menu display) to “2”.
3) Select page: F, address: 7D, change the data and minimize the distortion rate.
4) Press the PAUSE button of the adjustment remote commander.
5) Set the Hi-Fi sound switch (menu display) to “1”.
6) Select page: F, address: 7D, change the data and minimize the distortion rate.
7) Press the PAUSE button of the adjustment remote commander.
8) Repeat steps 2) to 7) and set the data of address: 7D so that the distortions rates when the Hi-Fi sound switch is set to “2” and set to “1” respectively are almost the same and minimum.
9) Press the PAUSE button of the adjustment remote commander.
10) Select page: 0, address: 01, and set data: 00.
11) Set the Hi-Fi sound switch to “STEREO”.

2. Hi8/standard 8 mm AFM 1.5 MHz Deviation Adjustment (VC-235 board)

Adjust to the optimum 1.5 MHz audio FM signal deviation.
If the adjustment is not correct, its playback level will differ from that of other units.

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape: For checking AFM stereo operation Monoscope section (WR5-9NS(NTSC)) (WR5-9CS(PAL))
Measurement Point	Audio left or right terminal of A/V jack
Measuring Instrument	Audio level meter
Adjustment Page	F
Adjustment Address	7B
Specified Value	–7.5 ± 2.0 dBs

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Set the Hi-Fi sound switch (menu display) to “1”.
3) Select page: F, address: 7B, change the data and set the 400 Hz signal level to the specified value.
4) Press the PAUSE button.
5) Set the Hi-Fi sound switch (menu display) to “STEREO”.
6) Select page: 0, address: 01, and set data: 00.

3. Hi8/standard 8 mm AFM 1.7 MHz Deviation Adjustment (VC-235 board)

Adjust to the optimum 1.7 MHz audio FM signal deviation.
If improper, this causes deteriorated separation (with stereo signal).

Mode	Playback
Signal	Hi8/standard 8 mm alignment tape: For checking AFM stereo operation Monoscope section (WR5-9NS(NTSC)) (WR5-9CS(PAL))
Measurement Point	Audio left or right terminal of A/V jack
Measuring Instrument	Oscilloscope
Adjustment Page	F
Adjustment Address	7C
Specified Value	–7.5 ± 2.0 dBs

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Set the Hi-Fi sound switch (menu display) to “2”.
3) Select page: F, address: 7C, change the data and set the 1 kHz signal level to the specified value.
4) Press the PAUSE button.
5) Set the Hi-Fi sound switch (menu display) to “STEREO”.
6) Select page: 0, address: 01, and set data: 00.

4. Digital8 Playback Level Check

Mode	VTR playback
Signal	Digital8 alignment tape: For audio operation check (WR5-3ND (NTSC)) (WR5-3CD (PAL))
Measurement Point	Audio left or right terminal of A/V jack
Measuring Instrument	Audio level meter and frequency counter
Specified Value	32 kHz mode: 1 kHz, + 3.0 ± 2.0 dBs 48 kHz mode: 1 kHz, + 3.0 ± 2.0 dBs 44.1 kHz mode: The 7.35 kHz signal level during EMP OFF is +2.0 ± 2.0 dBs. The 7.35 kHz signal level during EMP ON is –6 ± 2 dB from the signal level during EMP OFF.

Checking Method:

1) Check that the playback signal level is the specified value.

5. Overall Level Characteristics Check

Mode	Camera recording and playback
Signal	400 Hz, –66 dBs signal: MIC jack left and right
Measurement Point	Audio left or right terminal of A/V jack
Measuring Instrument	Audio level meter
Specified Value	–7.5 ± 3.0 dBs

Checking Method:

1) Input the 400 Hz, –66 dBs signal in the MIC jack.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the 400 Hz signal level is the specified value.

6. Overall Distortion Check

Mode	Camera recording and playback
Signal	400 Hz, –66 dBs signal: MIC jack left and right
Measurement Point	Audio left or right terminal of A/V jack
Measuring Instrument	Audio distortion meter
Specified Value	Below 0.4% (200 Hz to 6 kHz BPF ON)

Checking Method:

1) Input the 400 Hz, –66 dBs signal in the MIC jack.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the distortion is the specified value.

7. Overall Noise Level Check

Mode	Camera recording and playback
Signal	No signal: Insert a shorting plug in the MIC jack
Measurement Point	Audio left or right terminal of A/V jack
Measuring Instrument	Audio level meter
Specified Value	Below –45 dBs (IHF-A filter ON, 20 kHz LPF ON)

Checking Method:

1) Insert a shorting plug in the MIC jack.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the noise level is the specified value.

8. Overall Separation Check

Mode	Camera recording and playback
Signal	400 Hz, –66 dBs signal: MIC jack <right> [left] (Connect the MIC jack <left> [right] to GND)
Measurement Point	Audio <left> [right] terminal of A/V jack
Measuring Instrument	Audio level meter
Specified Value	Below –40 dBs

< > : Left channel check
[ ] : Right channel check

Checking Method:

1) Input the 400 Hz, –66 dBs signal in the <right> [left] terminal of the MIC jack only.
2) Record in the camera mode.
3) Playback the recorded section.
4) Check that the signal level of the audio output <left> [right] terminal is the specified value.

5-4. SERVICE MODE

4-1. ADJUSTMENT REMOTE COMMANDER

The adjustment remote commander is used for changing the calculation coefficient in signal processing, EVR data, etc. The adjustment remote commander performs bi-directional communication with the unit using the remote commander signal line (LANC). The resultant data of this bi-directional communication is written in the non-volatile memory.

1. Using the Adjustment Remote Commander

1) Connect the adjustment remote commander to the LANC terminal.
2) Set the HOLD switch of the adjustment remote commander to "HOLD" (SERVICE position). If it has been properly connected, the LCD on the adjustment remote commander will display as shown in Fig. 5-4-1.

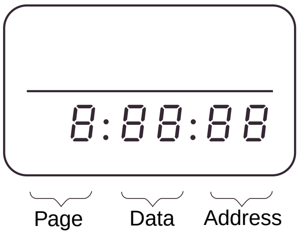


Fig. 5-4-1

3) Operate the adjustment remote commander as follows.
   - Changing the page
     The page increases when the EDIT SEARCH+ button is pressed, and decreases when the EDIT SEARCH– button is pressed. There are altogether 16 pages, from 0 to F.

Hexadecimal notation	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
LCD Display	0	1	2	3	4	5	6	7	8	9	A	b	c	d	E	F
Decimal notation conversion value	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

   - Changing the address
     The address increases when the FF (▶▶) button is pressed, and decreases when the REW (◀◀) button is pressed. There are altogether 256 addresses, from 00 to FF.
   - Changing the data (Data setting)
     The data increases when the PLAY (▶) button is pressed, and decreases when the STOP (■) button is pressed. There are altogether 256 data, from 00 to FF.
   - Writing the adjustment data
     The PAUSE button must be pressed to write the adjustment data (7, 8, C, D, E, F page) in the nonvolatile memory. (The new adjusting data will not be recorded in the nonvolatile memory if this step is not performed)
4) After completing all adjustments, turn off the main power supply (8.4 V) once.

2. Precautions Upon Using the Adjustment Remote Commander

Mishandling of the adjustment remote commander may erase the correct adjustment data at times. To prevent this, it is recommended that all adjustment data be noted down before beginning adjustments and new adjustment data after each adjustment.

4-2. DATA PROCESS

The calculation of the DDS display and the adjustment remote commander display data (hexadecimal notation) are required for obtaining the adjustment data of some adjustment items. In this case, after converting the hexadecimal notation to decimal notation, calculate and convert the result to hexadecimal notation, and use it as the adjustment data. Indicates the hexadecimal-decimal conversion table.

Hexadecimal-decimal Conversion Table ②

Lower digit of hexadecimal Upper digit of hexadecimal	0	1	2	3	4	5	6	7	8	9	A (A)	B (b)	C (c)	D (d)	E (E)	F (F)
0	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
2	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
3	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
4	64	65	66	67	68	69	70	71	72	73	74	77	76	77	78	79
5	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95
6	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111
7	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
8	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143
9	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159
A (A)	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175
① B (b)	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191
C (c)	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207
D (d)	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223
E (E)	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239
F (F)	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255

Note: The characters shown in the parenthesis ( ) shown the display on the adjustment remote commander.

(Example) If the DDS display or the adjustment remote commander shows BD (bd);
Because the upper digit of the adjustment number is B (b), and the lower digit is D (d), the meeting point "189" of ① and ② in the above table is the corresponding decimal number.

Table 5-4-1

4-3. SERVICE MODE

Additional note on adjustment

Note: After the completion of the all adjustments, cancel the service mode by either of the following ways.

1) After data on page: D and F is restored, unplug the main power supply and remove the coin lithium battery. (In this case, date and time and menu setting have been set by users are canceled. Perform resetting.)
2) After data on page: D and F is restored, select page: 0, address: 01, and return the data to 00. And when data on page: 2 and 3 are changed, return data to the original condition.

1. Setting the Test Mode

Page F	Address 22

Data	Function
80	Normal
81	Test mode Various emergency prohibitions and releases Drum emergency, capstan emergency, loading motor emergency, reel emergency, tape top and end, DEW detection

Page D	Address 10

Data	Function
00	Normal
01	Forced camera power ON
02	Forced VTR power ON
03	Forced camera + VTR power ON

- Before setting the data , select page: 0, address: 01, and set data: 01.
- For page D and F, the data set will be recorded in the non-volatile memory by pressing the PAUSE button of the adjustment remote commander. In this case, take note that the test mode will not be exited even when the main power is turned off (8.4 Vdc).
- After completing adjustments/repairs, be sure to return the data of this address to 00, and press the PAUSE button of the adjustment remote commander. And select page: 0, address: 01, and set data: 00.

2. Emergence Memory Address

2-1. C Page Emergence Memory Address

Page C	Address F4 to FF

Address	Contents
F4	EMG code when first error occurs
F6	Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs
F7	Lower: MSW code to be moved when first error occurs
F8	EMG code when second error occurs
FA	Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs
FB	Lower: MSW code to be moved when second error occurs
FC	EMG code when last error occurs
FE	Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs
FF	Lower: MSW code to be moved when last error occurs

When no error occurs in this unit, data “00” is written in the above addresses (F4 to FF). when first error occurs in the unit, the data corresponding to the error is written in the first emergency address (F4 to F7). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (F8 to FB).

Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (FC to FF).

Note: After completing adjustments, be sure to initialize the data of addresses F4 to FF to “00”.

Initializing method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: C, address: F4, set data: 00, and press the PAUSE button.
3) Select address: F5 to FF and set data “00” into them in the same way as address: F4.
4) Select page: 0, address: 01, and set data: 00.

2-2. F Page Emergence Memory Address

Note 1: Emergence of PB mode only.

Page F	Address 10 to 1B

Address	Contents
10	EMG code when first error occurs
12	Upper: MSW code when shift starts when first error occurs Lower: MSW code when first error occurs
13	Lower: MSW code to be moved when first error occurs
14	EMG code when second error occurs
16	Upper: MSW code when shift starts when second error occurs Lower: MSW code when second error occurs
17	Lower: MSW code to be moved when second error occurs
18	EMG code when last error occurs
1A	Upper: MSW code when shift starts when last error occurs Lower: MSW code when last error occurs
1B	Lower: MSW code to be moved when last error occurs

When no error occurs in this unit, data “00” is written in the above addresses (10 to 1B). when first error occurs in the unit, the data corresponding to the error is written in the first emergency address (10 to 13). In the same way, when the second error occurs, the data corresponding to the error is written in the second emergency address (14 to 17).

Finally, when the last error occurs, the data corresponding to the error is written in the last emergency address (18 to 1B).

Note 2: After completing adjustments, be sure to initialize the data of addresses 10 to 1B to “00”.

Initializing method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: F, address: 10, set data: 00, and press the PAUSE button.
3) Select address: 11 to 1B and set data “00” into them in the same way as in address: 10.
4) Select page: 0, address: 01, and set data: 00.

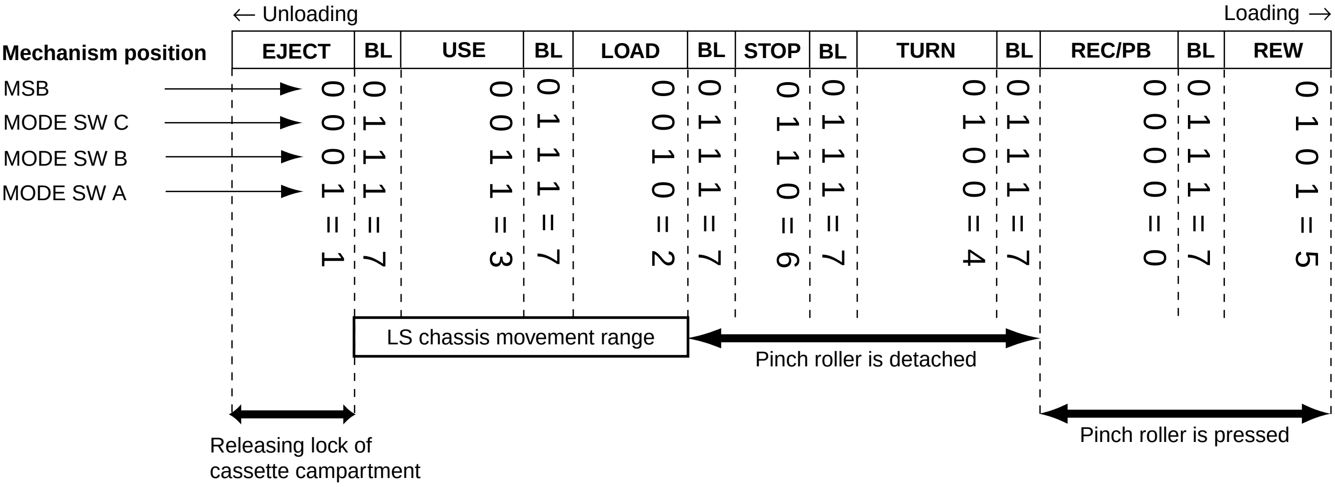
2-3. EMG Code (Emergency Code)

Codes corresponding to the errors which occur are written in C page, addresses F4, F8 and FC (or F page, addresses 10, 14 and 18). The type of error indicated by the code are shown in the following table.

Code	Emergency Type
00	No error
10	Loading motor emergency during loading
11	Loading motor emergency during unloading
22	T reel emergency during normal rotation
23	S reel emergency during normal rotation
24	T reel emergency (Short circuit between S reel terminal and T reel terminal)
30	FG emergency at the start up of the capstan
40	FG emergency at the start up of the drum
42	FG emergency during normal rotation of the drum

2-4. MSW Code

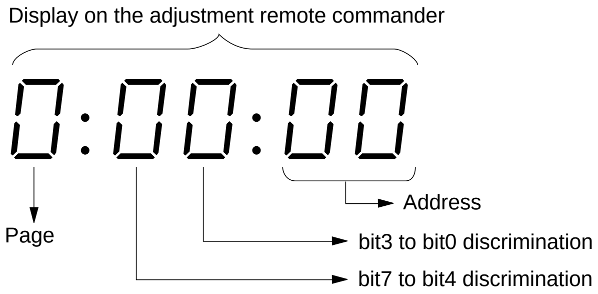
- The lower parts of the data of C page, addresses F6, FA and FE (or F page, addresses 12, 16 and 1A) represent the MSW codes (mode switch mechanism position) when errors occurs.
- The upper parts of the data of C page, addresses F6, FA and FE (or F page, addresses 12, 16 and 1A) represent, when the mechanism position is to be moved, the MSW codes at the start movement (when moving the loading motor).
- The lower parts of the data of C page, addresses F7, FB and FF (or F page, addresses 13, 17 and 1B) represent the MSW codes of the desired movement when the mechanism position is to be moved.


← Unloading
Loading →
Mechanism position
EJECT
BL
USE
BL
LOAD
BL
STOP
BL
TURN
BL
REC/PB
BL
REW
MSB
MODE SW C
MODE SW B
MODE SW A
0 0 0 1 = 1
0 1 1 1 = 7
0 0 1 1 = 3
0 1 1 1 = 7
0 0 1 0 = 2
0 1 1 1 = 7
0 1 1 0 = 6
0 1 1 1 = 7
0 1 0 0 = 4
0 1 1 1 = 7
0 0 0 0 = 0
0 1 1 1 = 7
0 1 0 1 = 5
LS chassis movement range
Pinch roller is detached
Releasing lock of cassette campartment
Pinch roller is pressed

Mechanism Position	MSW Code	Contents
EJECT	1	Position at which the cassette compartment lock is released. The mechanism will not move any further in the unloading direction.
BL	7	BLANC code. Between two codes. The mechanism will not be stopped by this code while it is operating.
USE	3	EJECT completion position. When the cassette is ejected, the mechanism will stop at this position.
LOAD	2	Code during loading/unloading. Code that is used while the LS chassis is moving.
STOP	6	Normal stop position. The pinch roller separates, the tension regulator returns, and the brakes of both reels turn on.
TURN	4	Position at which is used when the pendulum gear swings from S to T or from T to S.
REC/PB	0	PB, REC, CUE, REV, PAUSE, FF positions. The pinch roller is pressed and tension regulator is on.
REW	5	REW position. REW are carried at this position. The mechanism will not move any further in the loading direction.

3. Bit Value Discrimination

Bit values must be discriminated using the display data of the adjustment remote commander for the following items. Us the table below to discriminate if the bit value is “1” or “0”.


Display on the adjustment remote commander
0:00:00
Address
Page
bit3 to bit0 discrimination
bit7 to bit4 discrimination

(Example) If the remote commander display is “8E”, bit value from bit 7 to bit 4 can be discriminated from the column Ⓐ, and those from bit 3 to bit 0 from column Ⓑ.

	Display on the adjustment remote commander	Bit values			
		bit3 or bit7	bit2 or bit6	bit1 or bit5	bit0 or bit4
	0	0	0	0	0
	1	0	0	0	1
	2	0	0	1	0
	3	0	0	1	1
	4	0	1	0	0
	5	0	1	0	1
	6	0	1	1	0
	7	0	1	1	1
Ⓐ	8	1	0	0	0
	9	1	0	0	1
	A (A)	1	0	1	0
	B (b)	1	0	1	1
	C (C)	1	1	0	0
	D (d)	1	1	0	1
Ⓑ	E (E)	1	1	1	0
	F (F)	1	1	1	1

4. Input/output Check

Page 2	Address 49

Bit	Function	When bit value = 1	When bit value = 0
0			
1			
2			
3			
4	MIC jack	MIC jack is used	
5			
6	AUDIO/VIDEO jack	AUDIO/VIDEO jack is used	
7	S VIDEO jack		S VIDEO jack is used

Using method:

1) Select page: 2, address: 49.
2) By discriminating the bit value of display data, the state of the jack can be discriminated.

5. LED, LCD (Display Window) Check

Page 2	Address 05	Bit5

Using method:

1) Select page: 2, address: 05, and set the bit value of Bit5 to “1”.
2) Check that all LED are lit and all segments of LCD (display window) are lit.
3) Select page: 2, address: 05, and set the bit value of Bit5 to “0”.

6. Record of Use Check

Page 2	Address A2 to AA

Address	Function		Remarks
A2	Drum rotation	Minute	
A3	counted time	Hour (L)	10th place digit and 1st place digit of counted time (decimal digit)
A4	(BCD code)	Hour (H)	1000th place digit and 100th place digit of counted time (decimal digit)
A5	User initial power	Year	After setting the clock, set the date of power on next
A6	on date	Month	
A7	(BCD code)	Day	
A8	Final condensation	Year	
A9	occurrence date	Month	
AA	(BCD code)	Day	

Using method:

1) The record of use data is displayed at page: 2, addresses: A2 to AA.

Note 1: This data will be erased when the coin lithium battery (CF-69/71 board BH001) is removed (reset).

Note 2:

CF-69 board	TRV model
CF-71 board	TR model

TRV model: DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model: DCR-TR8000E/TR8100E

Note 3: When the drum was replaced, initialize the drum rotation counted time.

Initializing method of drum rotation counted time:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 2, address: A2, set data: 00, and press the PAUSE button.
3) Select address: A3 and A4 and set data “00” into them in the same way as in address: A2.
4) Select page: 0, address: 01, and set data: 00.

7. Switch Check (1)

Page 2	Address 43

Bit	Function	When bit value = 1	When bit value = 0
0	VTR MODE SW (SS-10000 block S001)	OFF	ON
1	CAM MODE SW (SS-10000 block S001)	OFF	ON
2	START/STOP SW (SS-10000 block S002)	OFF	ON
3	EJECT SW (FK-10000 block S012)	OFF	ON
4	CC DOWN SW (Mechanism chassis)	OFF (UP)	ON (DOWN)
5	PHOTO FREEEZE SW (FK-10000 block S013)	OFF	ON
6			
7			

Using method:

1) Select page: 2, address: 43.
2) By discriminating the bit value of display data, the state of the switches can be discriminated.

8. Switch Check (2)

Page 2	Address 60 to 66

Using method:

1) Select page: 2, address: 60 to 66.
2) By discriminating the display data, the pressed key can be discriminated.

Address	Data							
	00 to 0C	0D to 24	25 to 3F	40 to 5D	5E to 81	82 to AA	AB to D7	D8 to FF
60 (KEY AD0) IC4801 (93)	LASER AV LINK (FK-10000 block) (S001)	STOP (FK-10000 block) (S002)	FF (FK-10000 block) (S003)	REC (FK-10000 block) (S004, 005)	EDIT SEARCH (+) (FK-10000 block) (S006)	EDIT SEARCH (–) (FK-10000 block) (S007)		No key input
61 (KEY AD1) IC4801 (94)	PHOTO START (FK-10000 block) (S014)	PAUSE (FK-10000 block) (S009)	REW (FK-10000 block) (S010)	PLAY (FK-10000 block) (S011)				No key input
62 (KEY AD2) IC4801 (95)	DIGITAL EFFECT (CF-69 board) (S001) (CF-71 board) (S001)	PICTURE EFFECT (CF-69 board) (S003) (CF-71 board) (S002)	MENU (CF-69 board) (S007) (CF-71 board) (S005)	TITLE (CF-69 board) (S010) (CF-71 board) (S006)	PB ZOOM (CF-69 board) (S014) (CF-71 board) (S008)			No key input
63 (KEY AD3) IC4801 (96)							PANEL COLSE (PANEL OPEN/ CLOSE SWITCH) (S008)	PANEL OPEN (PANELOPEN/ CLOSE SWITCH) (S008)
64 (KEY AD4) IC4801 (97)	SUPER NIGHTSHOT (MF-10000 block) (S002)	DATA CODE (CF-69 board) (S005) (CF-71 board) (S003)	END SEARCH (CF-69 board) (S009)		DISPLAY (CF-69 board) (S016)	FOCUS INFINTY (MF-10000 block) (S001)	FOCUS AUTO (MF-10000 block) (S001)	FOCUS MANUAL (MF-10000 block) (S001)
65 (KEY AD5) IC4801 (98)			EXEC (CF-69 board) (S006) (CF-71 board) (S004)	EXPOSURE (CF-69 board) (S013) (CF-71 board) (S007)	PROGRAM AE (CF-69 board) (S017) (CF-71 board) (S009)	BACK LIGHT (CF-69 board) (S019) (CF-71 board) (S010)	FADER (CF-69 board) (S020) (CF-71 board) (S011)	No key input
66 (KEY AD6) IC4801 (99)		LCD BRIGHT (+) (PD-117 board) (S5701)	LCD BRIGHT (–) (PD-117 board) (S5702)	VOLUME (+) (PD-117 board) (S5703)	VOLUME (–) (PD-117 board) (S5704)	PANEL REVERSE (PR-10000 block) (S001)		PANEL NORMAL (PR-10000 block) (S001)

Note:

CF-69 board	PD-117 board	TRV model
CF-71 board	—	TR model

TRV model: DCR-TRV120/TRV120E/TRV120P/TRV125E
TR model: DCR-TR8000E/TR8100E

9. Headphone Jack Check

Page 3	Address 5A

Bit	Function	When bit value = 1	When bit value = 0
2	Headphone jack	Headphone jack is used	

Using method:

1) Select page: 3, address: 5A.
2) By discriminating the bit value of display data, the state of the headphone jack can be discriminated.

SECTION 6
REPAIR PARTS LIST

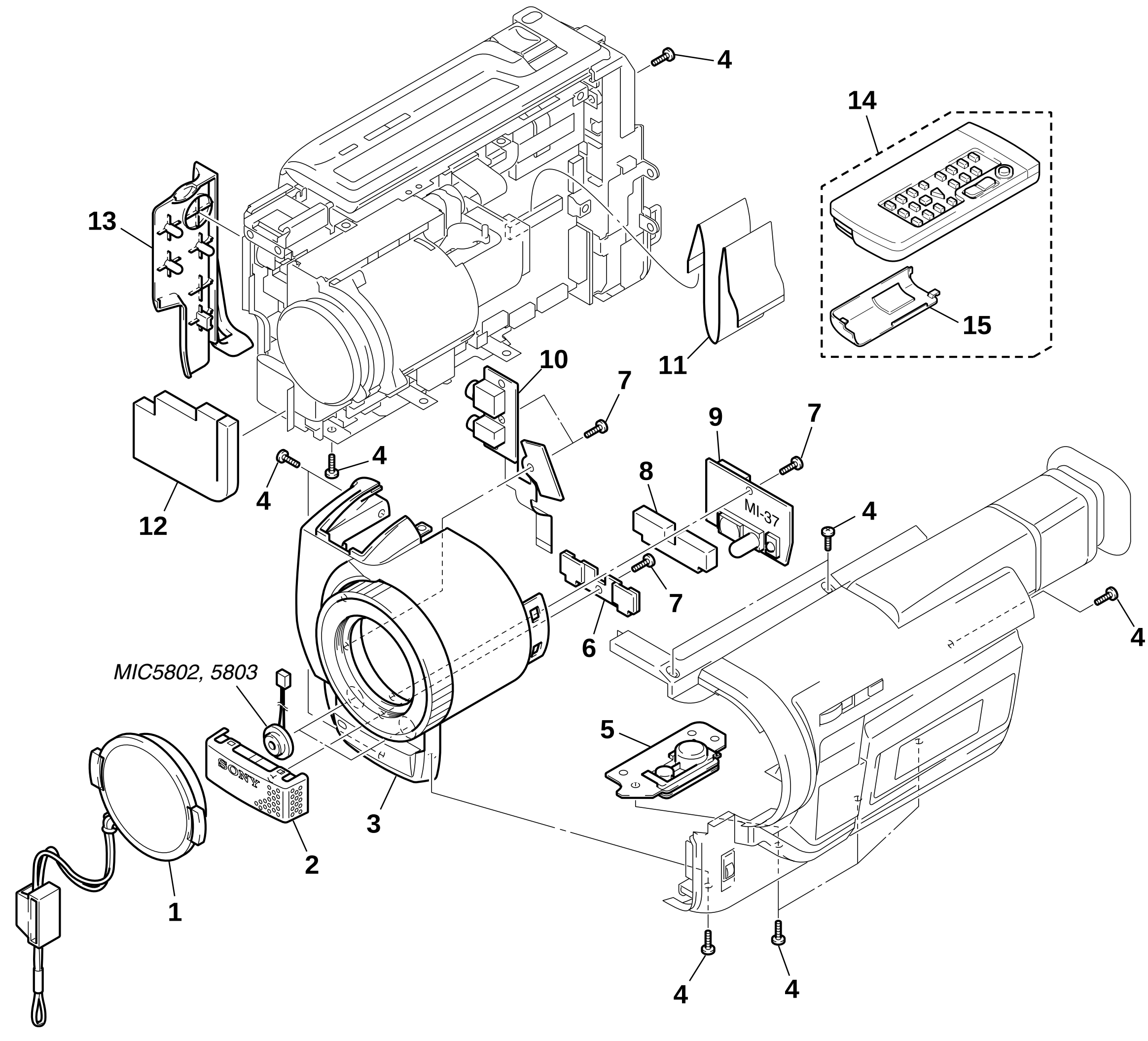
6-1. EXPLODED VIEWS

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

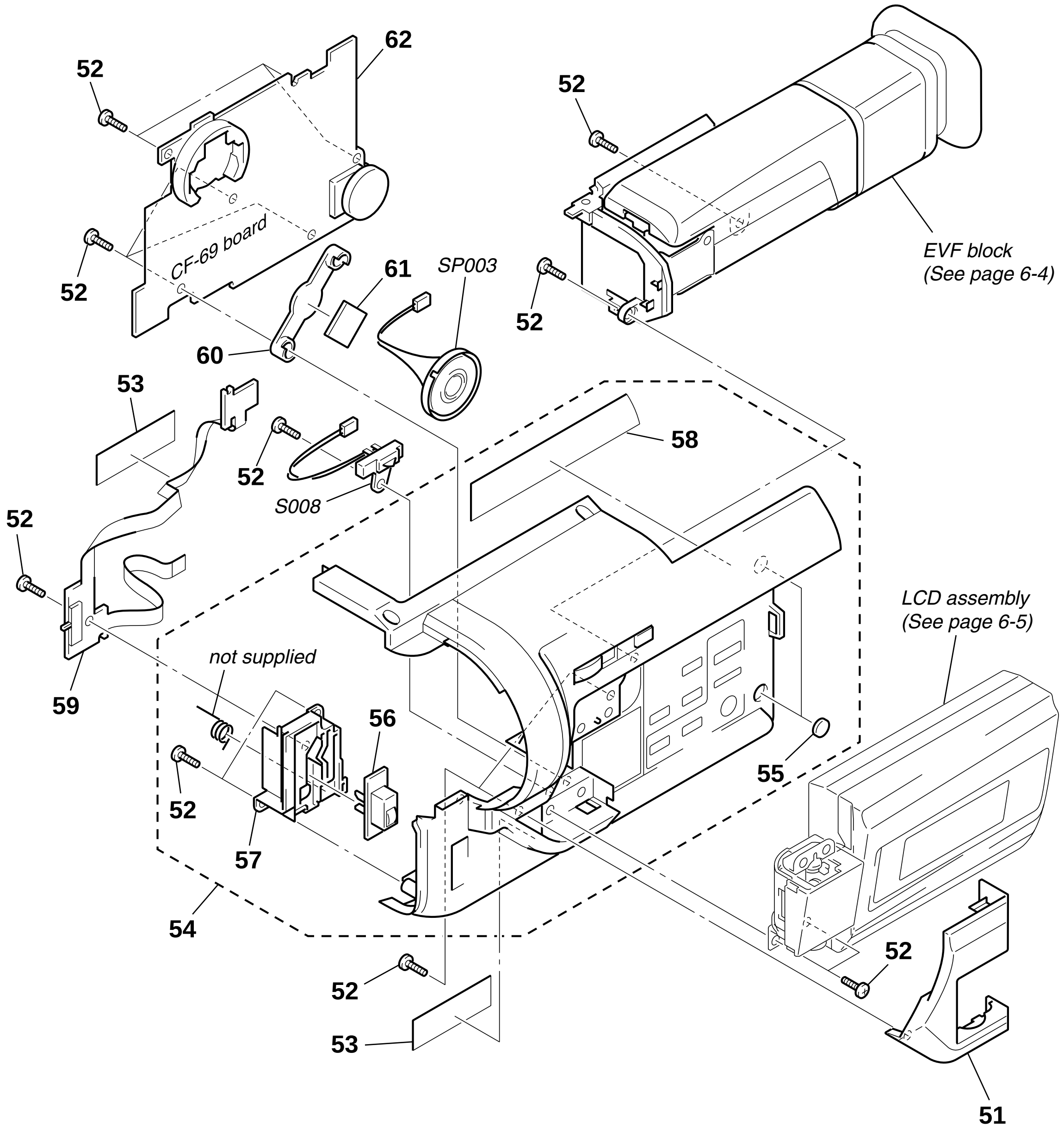
NOTE:
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- Color Indication of Appearance Parts
  Example:
  KNOB, BALANCE (WHITE) . . . (RED)
  ↑ ↑
  Parts Color Cabinet's Color
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- The mechanical parts with no reference number in the exploded views are not supplied.
- Accessories are given in the last of the electrical parts list.
- Abbreviation
  AR : Argentina model
  AUS : Australian model
  BR : Brazilian model
  CN : Chinese model
  CND : Canadian model
  EE : East European model
  HK : Hong Kong model
  JE : Tourist model
  KR : Korea model
  NE : North European model
  RU : Russian model

6-1-1. FRONT PANEL SECTION



Ref. No.	Part No.	Description	Remark
1	X-3949-376-1	CAP (N) ASSY, LENS	
2	X-3950-220-1	GRILLE (2.5) ASSY, MICROPHONE	
3	X-3950-217-1	PANEL (2.5) ASSY, F (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	
3	X-3950-218-1	PANEL (2.5) ASSY, F (TRV120E: AEP, UK, EE, NE, RU, /TR8000E)	
3	X-3950-254-1	PANEL (2.5) ASSY, F (TRV125E/TR8100E)	
4	3-968-729-01	SCREW (2X4)	
5	3-987-717-01	SCREW (TRIPOD)	
6	X-3950-221-1	RETAINER ASSY, MICROPHONE	
7	3-948-339-61	TAPPING	
* 8	3-059-031-01	CUSHION (MI)	
9	A-7074-267-A	MI-37 BOARD, COMPLETE (TRV120/TRV120P)	
9	A-7074-277-A	MI-37 BOARD, COMPLETE (TRV120E/TRV125E/TR8000E/TR8100E)	
10	1-676-818-31	FP-156 FLEXIBLE BOARD	
11	1-790-334-11	CABLE, FLEXIBLE FLAT (FFC-257S)	
* 12	3-059-032-01	CUSHION (SE)	
13	3-058-723-01	COVER, JACK	
14	1-475-141-61	COMMANDER, REMOTE (RMT-814)	
15	3-742-854-01	LID, BATTERY (for RMT-814)	
MIC5802	1-542-312-11	MICROPHONE (L)	
MIC5803	1-542-312-11	MICROPHONE (R)	

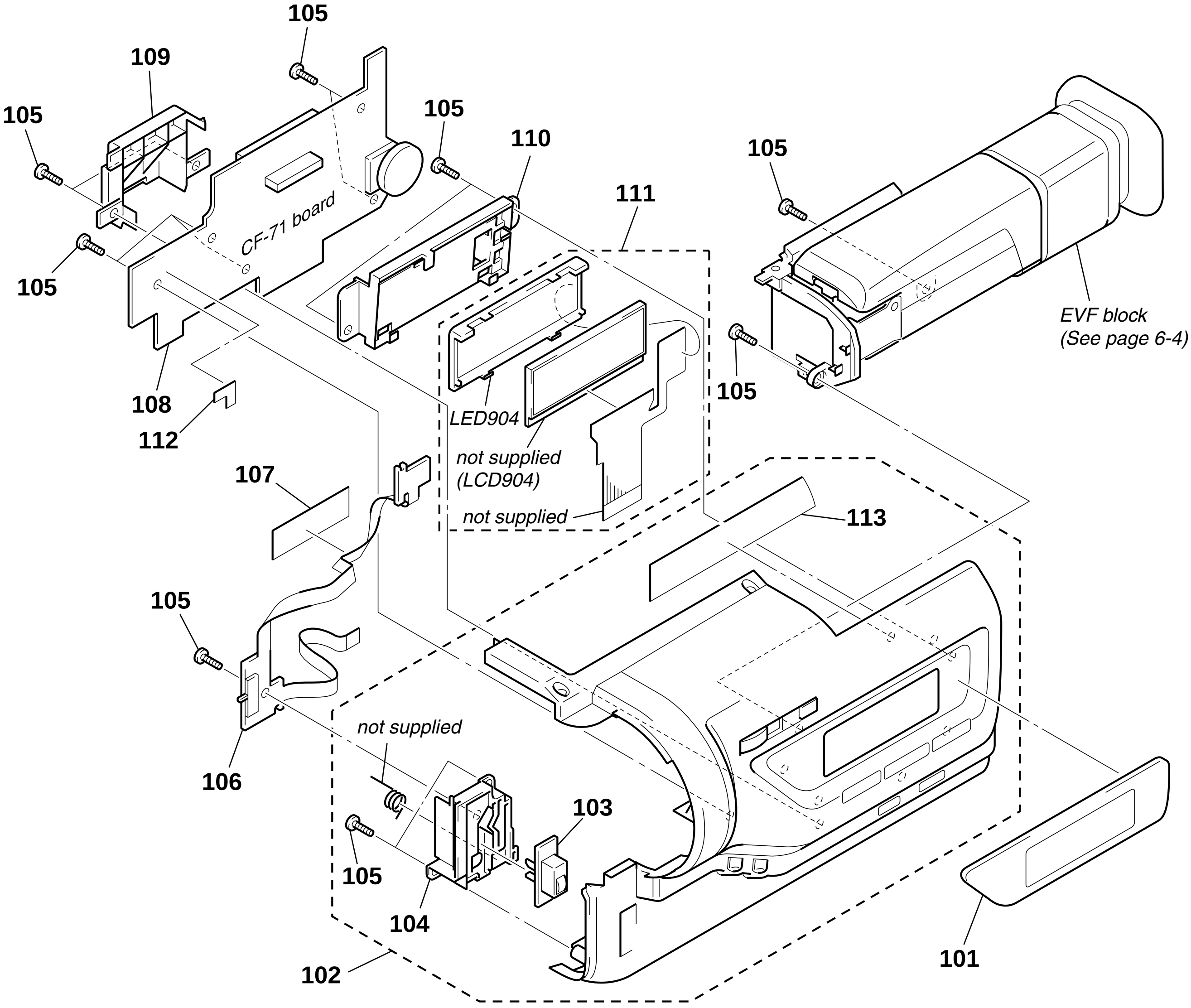
6-1-2. CABINET (R) SECTION
(TRV120/TRV120E/TRV120P/TRV125E)


52
62
52
CF-69 board
52
61
SP003
52
EVF block
(See page 6-4)
52
60
53
58
52
S008
52
LCD assembly
(See page 6-5)
not supplied
59
56
55
52
57
54
52
52
53
51

Ref. No.	Part No.	Description	Remark
51	3-058-670-01	COVER (R) (101), HINGE (TRV120/TRV120P)	
51	3-058-670-11	COVER (R) (101), HINGE (TRV120E/TRV125E)	
52	3-948-339-61	TAPPING	
53	3-941-343-21	TAPE (A)	
54	X-3950-235-1	CABINET (R) (101) ASSY	
55	3-959-978-02	CUSHION, PANEL	
56	3-058-698-01	KNOB (100), MF	
57	3-058-697-01	RETAINER (100), MF	

Ref. No.	Part No.	Description	Remark
* 58	3-059-650-01	BLIND (B) (101), VF	
59	1-418-801-11	SWITCH BLOCK, CONTROL (MF-10000)	
* 60	3-058-659-01	RETAINER (101), SPEAKER	
* 61	3-058-658-01	SPACER (101), SPEAKER	
62	A-7074-268-A	CF-69 BOARD, COMPLETE	
S008	1-771-848-11	SWITCH, PUSH (PANEL OPEN/CLOSE)	
SP003	1-529-590-11	SPEAKER (2.0cm)	

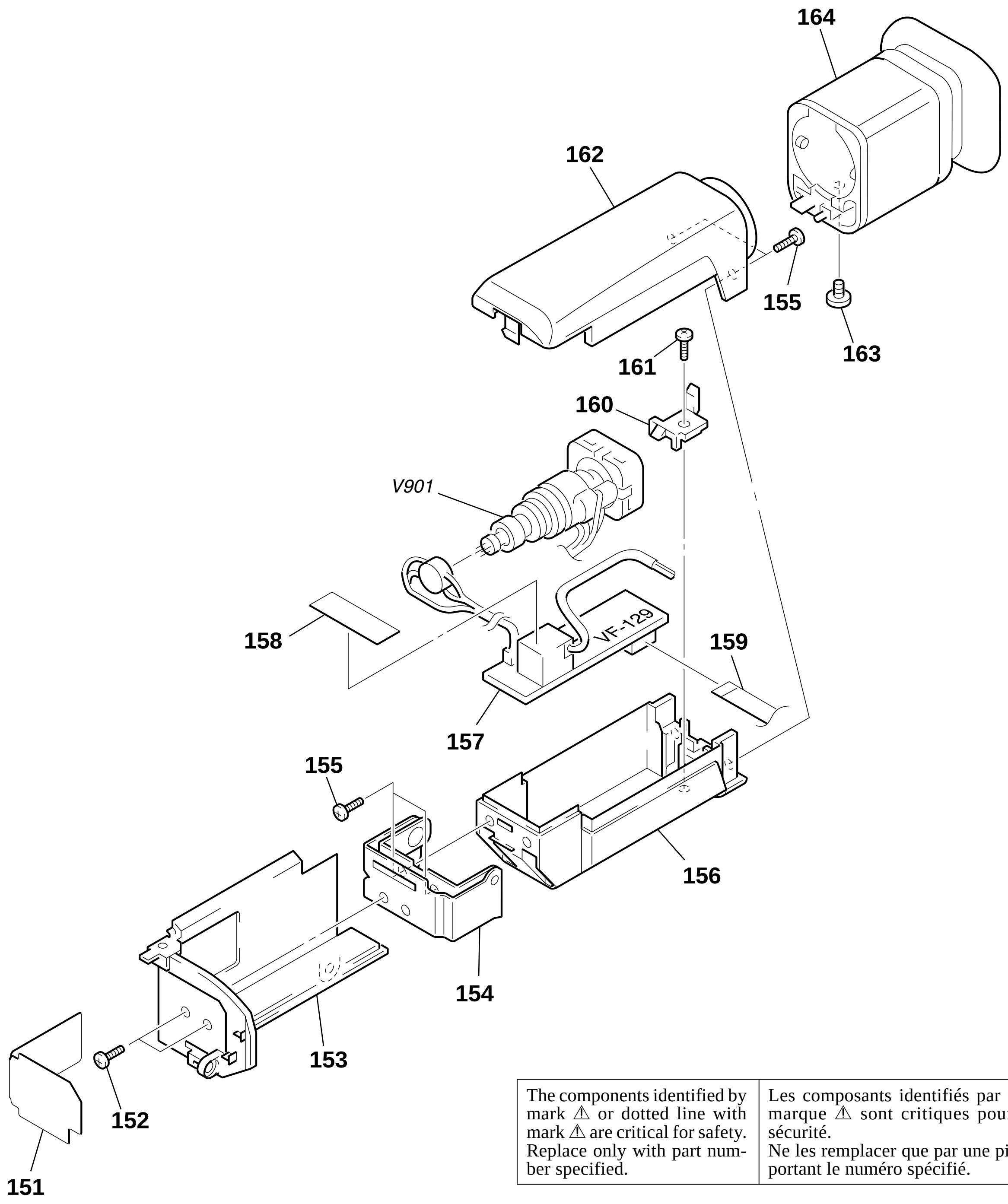
6-1-3. CABINET (R) SECTION (TR8000E/TR8100E)


105
109
105
105
110
105
111
CF-71 board
105
EVF block
(See page 6-4)
105
108
112
LED904
not supplied
(LCD904)
107
not supplied
113
105
not supplied
106
103
105
104
102
101

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
101	3-058-700-01	WINDOW (100), LCD	
102	X-3950-238-1	CABINET (R) (100) ASSY	
103	3-058-698-01	KNOB (100), MF	
104	3-058-697-01	RETAINER (100), MF	
105	3-948-339-61	TAPPING	
106	1-418-801-11	SWITCH BLOCK, CONTROL (MF-10000)	
107	3-941-343-21	TAPE (A)	
108	A-7074-284-A	CF-71 BOARD, COMPLETE	
109	3-053-717-11	RETAINER, LITHIUM BATTERY	
110	3-058-699-01	HOLDER (100), LCD	
111	A-7094-826-A	INDICATION (LCD) BLOCK ASSY (SERVICE)	
* 112	3-058-900-01	SHEET (100), MUFFLE	
* 113	3-059-649-01	BLIND (B) (100), VF	
⚠LED904	1-517-866-11	LIGHT, BACK	

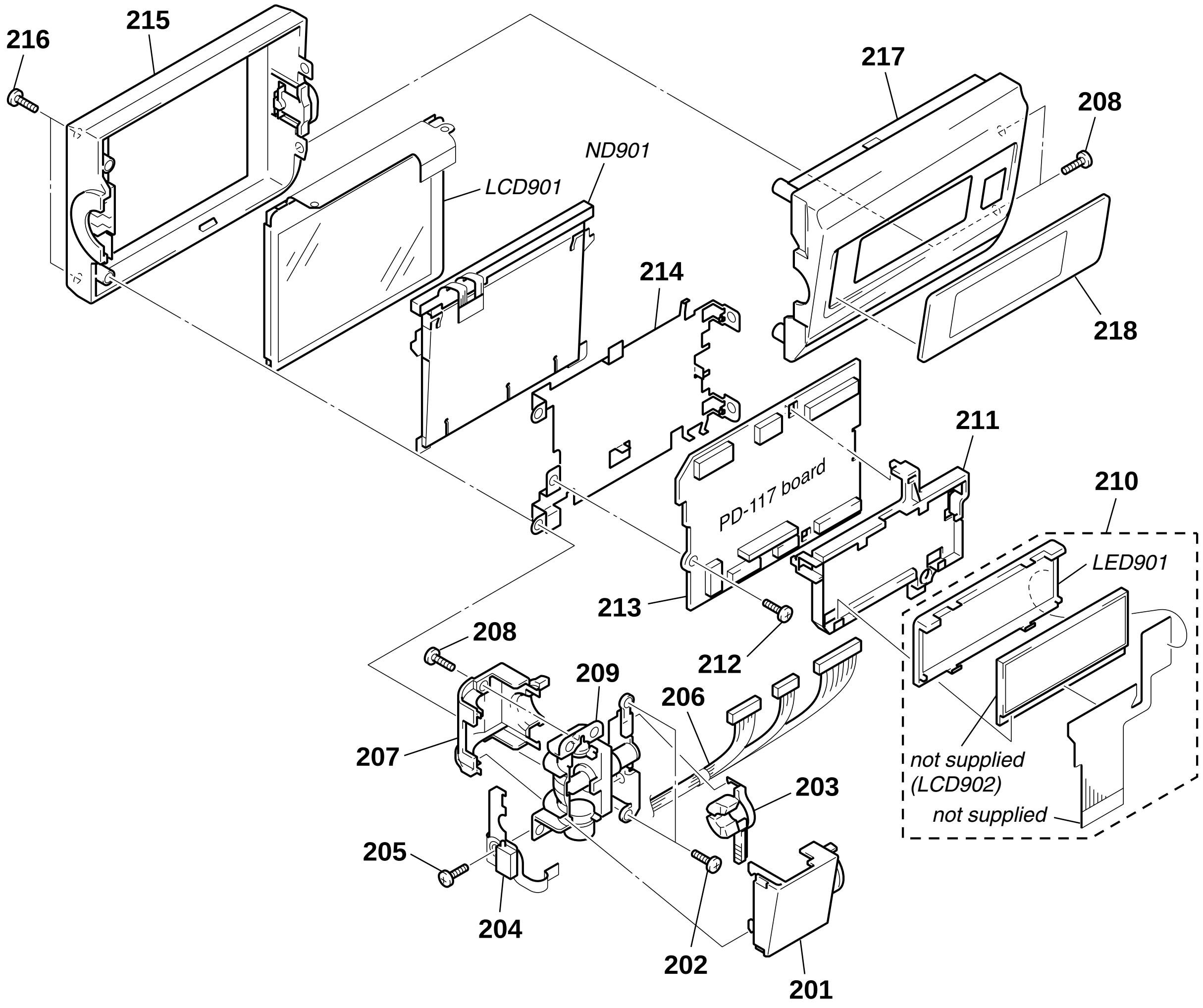
6-1-4. EVF BLOCK SECTION



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
* 151	3-058-641-01	GUIDE (100), HARNESS	
152	3-968-729-01	SCREW (2X4)	
153	X-3950-234-1	BASE (B) (100) ASSY, VF	
154	X-3950-230-1	HINGE ASSY, VF	
155	3-948-339-81	TAPPING	
156	3-058-644-01	CABINET (LOWER) (B) (100), EVF	
157	A-7073-838-A	VF-129 BOARD, COMPLETE	(TRV120/TRV120P)
157	A-7073-855-A	VF-129 BOARD, COMPLETE	(TRV120E/TRV125E/TR8000E/TR8100E)
158	3-941-343-21	TAPE (A)	
159	1-792-454-11	CABLE, FLEXIBLE FLAT (FFC-289)	
160	3-053-681-01	TALLY, EVF	
161	3-948-339-61	TAPPING	
162	X-3950-233-1	CABINET (UPPER) (B) (100) ASSY, EVF	
163	3-975-898-01	SCREW (T), F LOCK	
164	X-3949-329-1	FINDER (S) ASSY	
⚠V901	1-452-673-61	CRT ASSY (M01KXX90WB)	

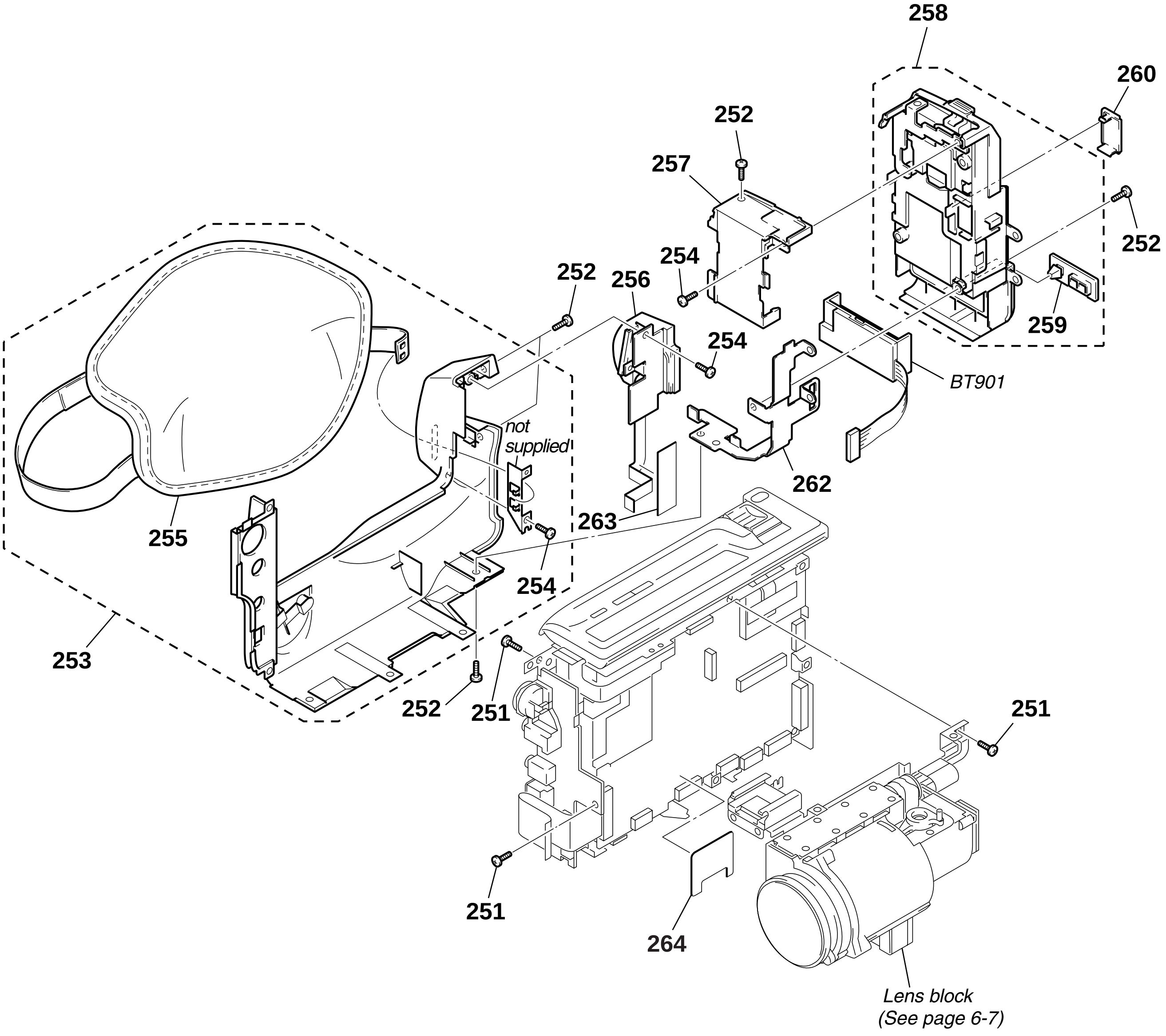
6-1-5. LCD ASSEMBLY SECTION
(TRV120/TRV120E/TRV120P/TRV125E)



The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

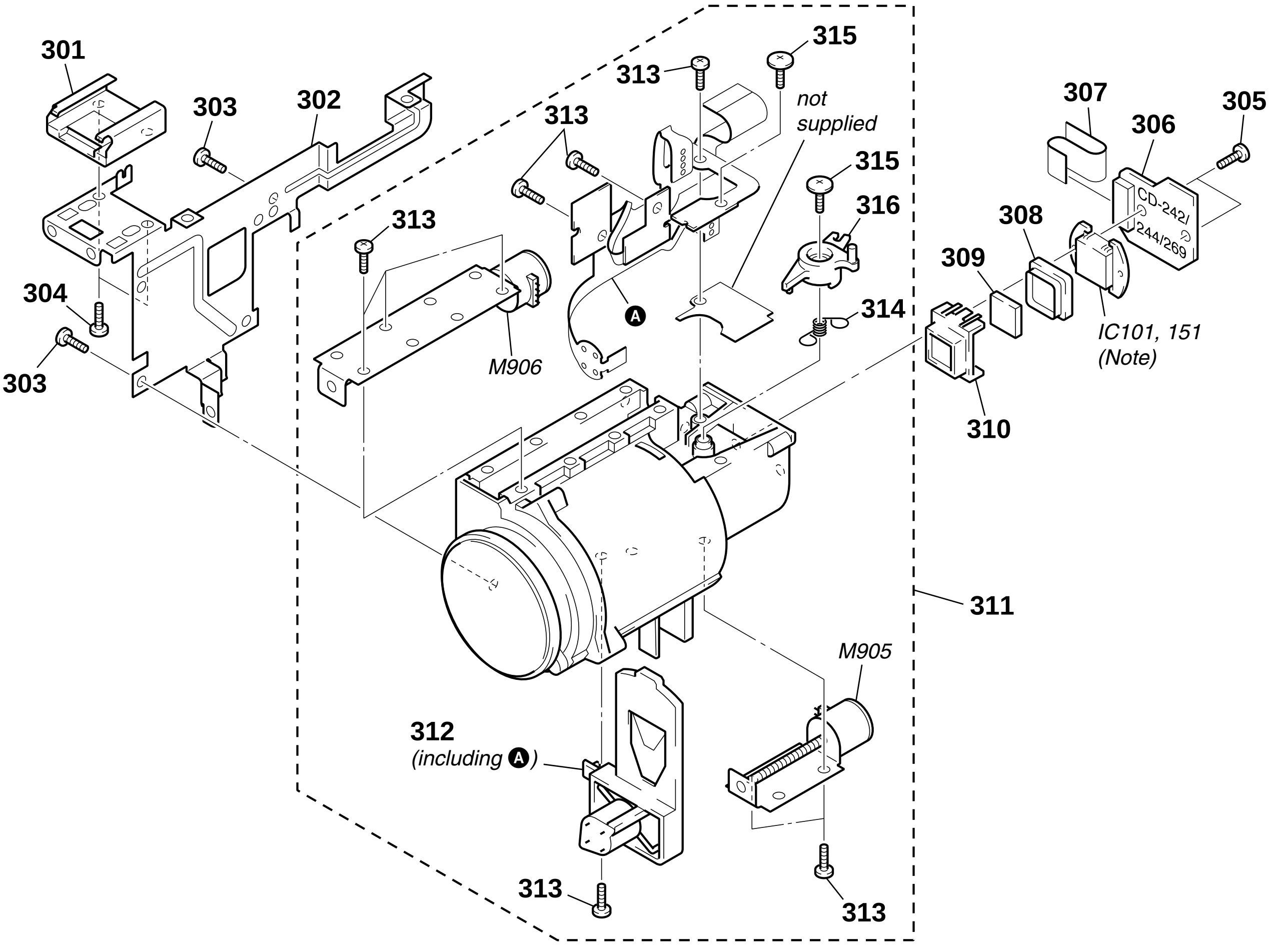
Ref. No.	Part No.	Description	Ref. page No.
201	3-058-671-01	COVER (C) (101), HINGE	
202	3-948-339-31	SCREW, TAPPING	
* 203	3-058-672-01	CLAMP, HARNESS	
204	1-418-802-11	SWITCH BLOCK, CONTROL (PR-10000)	
205	4-981-286-01	SCREW (M1.7X2) (IB LOCK)	
206	1-960-225-11	HARNESS (DP-83)	
207	3-058-673-01	COVER (M), HINGE	
208	3-968-729-01	SCREW (2X4)	
209	X-3950-237-1	HINGE ASSY	
210	A-7094-826-A	INDICATION (LCD) BLOCK ASSY (SERVICE)	
211	3-058-667-01	HOLDER (101), LCD	
212	3-713-786-21	SCREW (M2X3)	
213	A-7074-272-A	PD-117 (TYPE S 61K) BOARD, COMPLETE (TRV120/TRV120P)	
213	A-7074-280-A	PD-117 (TYPE S 123K) BOARD, COMPLETE (TRV120E: AEP, UK, EE, NE, RU/TRV125E)	
213	A-7074-290-A	PD-117 (TYPE C) BOARD, COMPLETE (TRV120E: E, HK, AUS, CN, JE)	
214	3-058-666-01	FRAME (101), PANEL	
215	X-3950-236-1	CABINET (M) (101) ASSY, P	
216	3-948-339-81	TAPPING	
217	3-058-665-01	CABINET (C) (101), P	
218	3-058-668-01	WINDOW (101), LCD (TRV120/TRV120P)	
218	3-058-668-11	WINDOW (101), LCD (TRV120E)	
218	3-058-668-21	WINDOW (101), LCD (TRV125E)	
LCD901	1-803-852-21	INDICATOR MODULE LIQUID CRYSTAL (TYPE S 61K) (TRV120/TRV120P)	
LCD901	1-803-853-21	INDICATOR MODULE LIQUID CRYSTAL (TYPE S 123K) (TRV120E: AEP, UK, EE, NE, RU/TRV125E)	
LCD901	1-803-859-31	INDICATOR MODULE LIQUID CRYSTAL (TYPE C) (TRV120E: E, HK, AUS, CN, JE)	
⚠LED901	1-517-866-11	LIGHT, BACK	
⚠ND901	1-517-751-11	TUBE, FLUORESCENT, COLD CATHODE (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	
⚠ND901	1-517-751-21	TUBE, FLUORESCENT, COLD CATHODE (TRV120E: AEP, UK, EE, NE, RU/TRV125E)	

6-1-6. CABINET (L) SECTION


258
260
252
257
252
254
252
256
254
BT901
not supplied
262
263
255
254
253
252
251
251
251
264
Lens block
(See page 6-7)

Ref. No.	Part No.	Description	Ref. page No.
251	3-713-786-21	SCREW (M2X3)	
252	3-968-729-01	SCREW (2X4)	
253	X-3950-223-1	CABINET (L) ASSY (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	
253	X-3950-279-1	CABINET (L) ASSY (TRV120E: AEP, UK, EE, NE, RU/TRV125E/TR8000E/TR8100E)	
254	3-948-339-61	TAPPING	
255	3-052-815-01	BELT (ES), GRIP	
256	1-418-800-21	SWITCH BLOCK, CONTROL (SS-10000) (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	
256	1-418-800-41	SWITCH BLOCK, CONTROL (SS-10000) (TRV120E: AEP, UK, EE, NE, RU/TRV125E/TR8000E/TR8100E)	
257	3-058-625-01	CABINET, MS	
258	X-3950-222-1	PANEL ASSY, BATTERY (EXCEPT TRV120: BR)	
258	X-3950-496-1	PANEL ASSY, BATTERY (TRV120: BR)	
259	3-987-656-01	LID, JACK	
260	3-975-752-01	LID (BT), CPC	
262	3-058-619-01	SHEET METAL (LOWER), STRAP	
263	3-941-343-21	TAPE (A)	
* 264	3-059-461-01	SHEET, RP SHIELD	
BT901	1-694-384-11	TERMINAL BOARD, BATTERY	

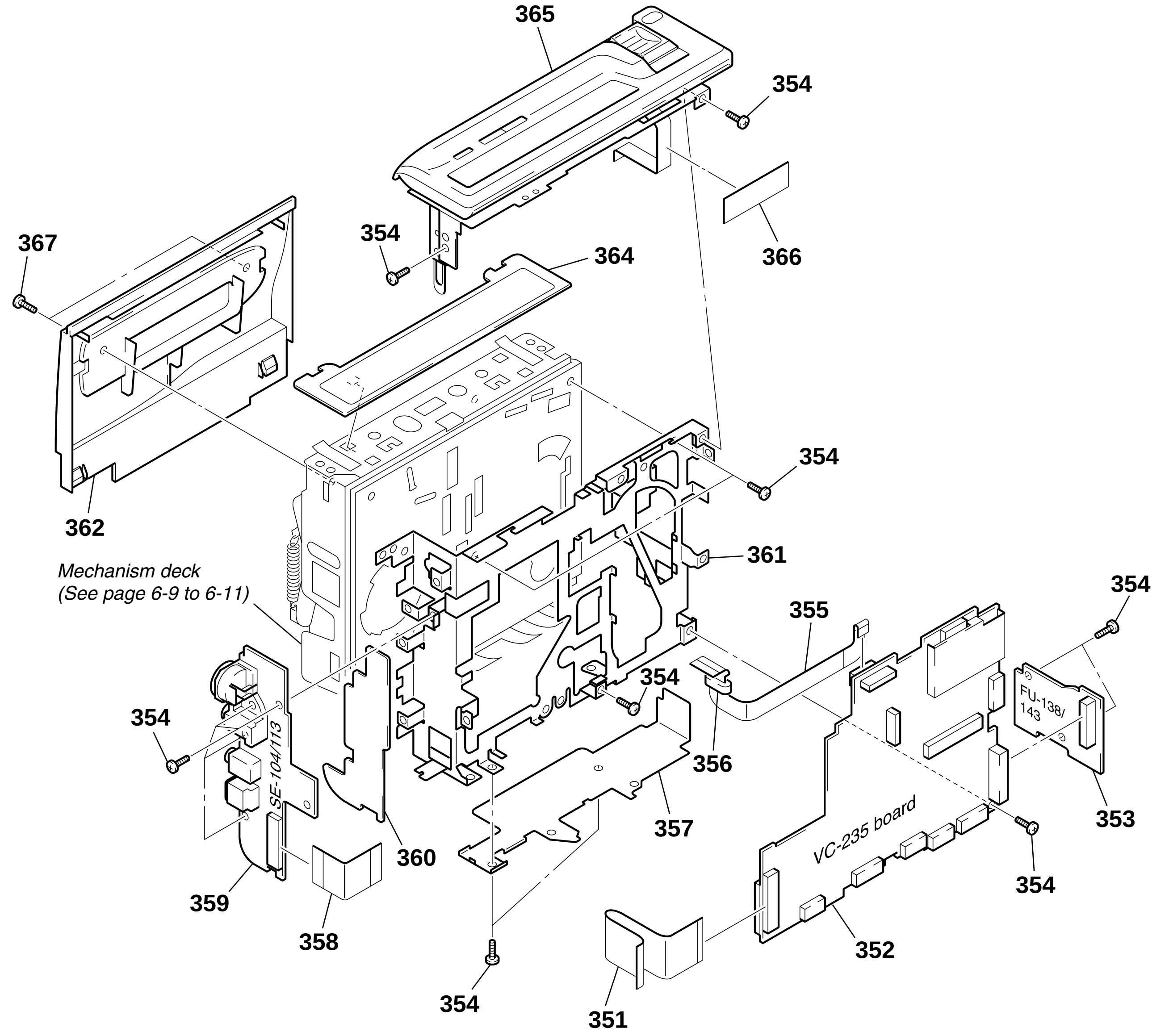
6-1-7. LENS BLOCK SECTION


301
303
302
304
303
313
315
not supplied
313
313
315
316
314
A
M906
307
306
305
CD-242/244/269
308
309
IC101, 151
(Note)
310
311
M905
312
(including A)
313
313

(Note) Be sure to read “Precuations for Replcement of CCD Imager” on page 4-8, 4-10 when changing the CCD imager

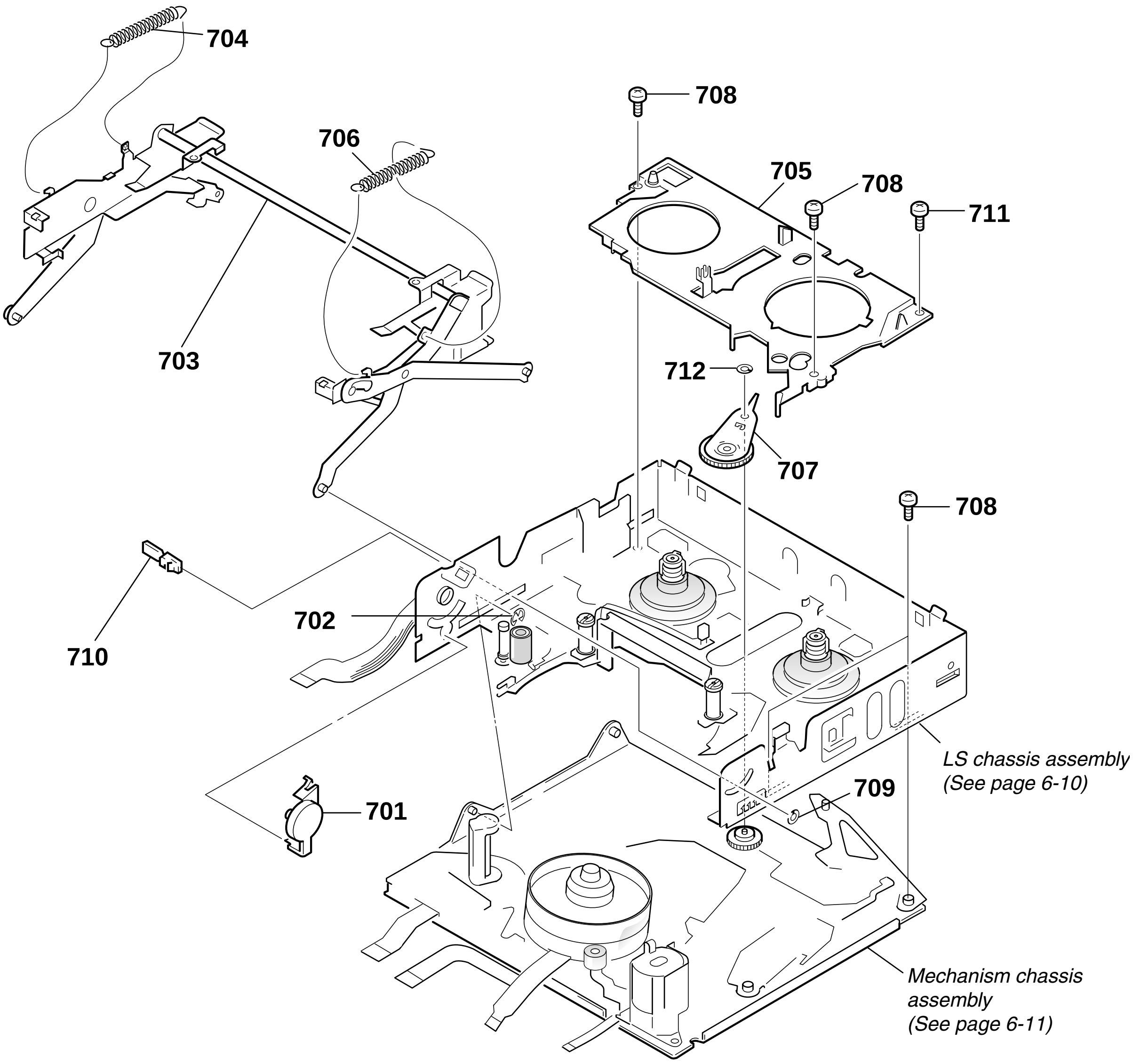
Ref. No.	Part No.	Description	Ref. page No.
301	1-793-996-11	CONNECTOR, EXTERNAL	
302	3-058-595-01	FRAME, LENS	
303	3-948-339-61	TAPPING	
304	3-989-735-01	SCREW (M1.7), LOCK ACE, P2	
305	3-318-203-11	SCREW (B1.7X6), TAPPING	
306	A-7074-270-A	CD-242 BOARD, COMPLETE (TRV120/TRV120P)	
306	A-7074-279-A	CD-244 BOARD, COMPLETE (TRV120E/TRV125E)	
306	A-7074-286-A	CD-269 BOARD, COMPLETE (TR8000E/TR8100E)	
307	1-676-822-11	FP-161 FLEXIBLE BOARD	
308	3-968-054-11	RUBBER (FM), SHIELD	
309	1-758-155-21	FILTER BLOCK, OPTICAL (TRV120E/TRV125E/TR8000E/TR8100E)	
309	1-758-216-21	FILTER BLOCK, OPTICAL (TRV120/TRV120P)	
310	3-978-981-11	ADAPTOR (FK), CCD FITTING	
311	8-848-736-01	DEVICE, LENS LSV-680A	
312	1-758-445-11	IRIS IR-680 (including FLEXIBLE BOARD)	
313	3-713-791-41	TAPPING (B1.7X5)	
314	3-059-508-01	SPRING, RETAIN	
315	3-056-022-01	TAPPING (B1.7X3.5)	
316	3-059-501-01	LEVER, IR	
IC101	A-7030-821-A	CCD BLOCK ASSY (CCD IMAGER) (TRV120/TRV120P) (Note)	
IC151	A-7031-072-A	CCD BLOCK ASSY (CCD IMAGER) (TRV120E/TRV125E/TR8000E/TR8100E) (Note)	
M905	1-763-472-11	MOTOR, STEPPING (F680) (FOCUS)	
M906	1-763-471-11	MOTOR, STEPPING (Z680) (ZOOM)	

6-1-8. MAIN BOARD SECTION


365
354
367
354
364
366
354
362
Mechanism deck
(See page 6-9 to 6-11)
361
354
355
354
354
FU-138/143
SE-104/113
356
357
353
360
VC-235 board
354
359
358
352
354
351

Ref. No.	Part No.	Description	Ref. page No.
351	1-676-819-11	FP-157 FLEXIBLE BOARD	
352	A-7094-782-A	VC-235 BOARD, COMPLETE (SERVICE) (TRV120/TRV120P)	
352	A-7094-783-A	VC-235 BOARD, COMPLETE (SERVICE) (TRV120E/TRV125E)	
352	A-7094-784-A	VC-235 BOARD, COMPLETE (SERVICE) (TR8000E/TR8100E)	
353	A-7074-271-A	FU-138 BOARD, COMPLETE (TRV120/TRV120E/TRV120P/TRV125E)	
353	A-7074-287-A	FU-143 BOARD, COMPLETE (TR8000E/TR8100E)	
354	3-713-786-21	SCREW (M2X3)	
355	1-676-821-11	FP-160 FLEXIBLE BOARD	
356	1-500-226-31	BEAD, FERRITE	
357	3-058-594-01	FRAME (B), MD	
358	1-676-820-11	FP-159 FLEXIBLE BOARD	
359	A-7074-269-A	SE-104 BOARD, COMPLETE (TRV120/TRV120P)	
359	A-7074-278-A	SE-104 BOARD, COMPLETE (TRV120E/TRV125E)	
359	A-7074-285-A	SE-113 BOARD, COMPLETE (TR8000E/TR8100E)	
* 360	3-060-001-01	SHEET, MD	
361	3-058-593-01	FRAME (A), MD	
362	X-3950-224-1	LID ASSY, CASSETTE	
364	X-3950-697-1	LID ASSY, LS	
365	1-418-799-41	SWITCH BLOCK, CONTROL (FK-10000) (TRV120/TRV120E: E, HK, AUS, CN, JE/ TRV120P)	
365	1-418-799-51	SWITCH BLOCK, CONTROL (FK-10000) (TRV120E: AEP, UK, EE, NE, RU/TRV125E/ TR8000E/TR8100E)	
366	3-941-343-21	TAPE (A)	
367	3-968-729-01	SCREW (2X4)	

6-1-9. CASSETTE COMPARTMENT ASSEMBLY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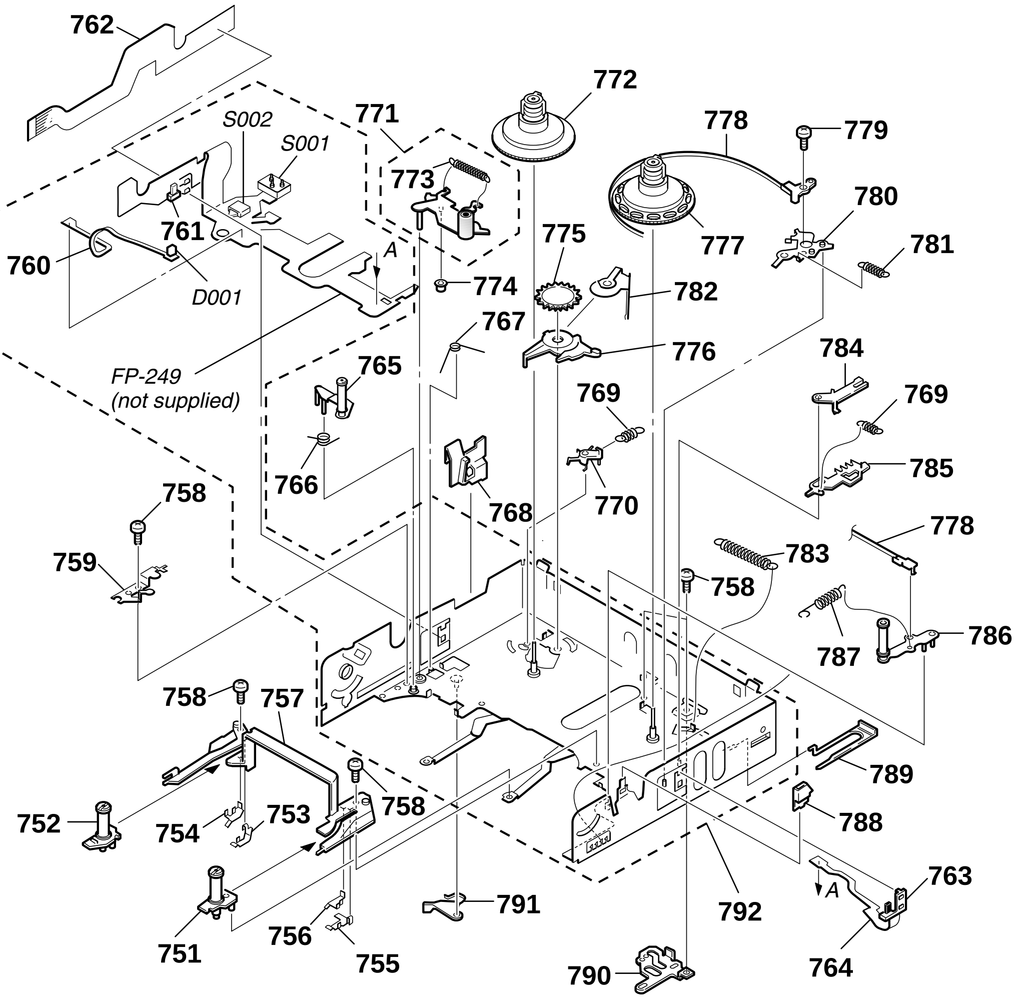
702
LS chassis assembly
(See page 6-10)
709
701
Mechanism chassis
assembly
(See page 6-11)

Ref. No.	Part No.	Description	Ref. page No.	Ref. No.	Part No.	Description	Ref. page No.
701	A-7040-421-A	DAMPER ASSY		707	X-3945-399-1	GEAR ASSY, GOOSENECK	
702	7-624-102-04	STOP RING 1.5, TYPE -E		708	3-947-503-01	SCREW (M1.4)	
703	X-3949-153-2	CASSETTE COMPARTMENT ASSY		709	3-979-686-01	WASHER, STOPPER	
704	3-965-587-03	SPRING (POWER TENSION), TENSION		710	3-971-076-01	FASTENER, D	
705	3-989-479-01	RETAINER (2), GOOSENECK		711	3-976-055-01	SCREW (M1.4X1)	
706	3-973-268-01	SPRING (POWER TENSION), TENSION		712	3-331-007-21	WASHER	

6-1-10. LS CHASSIS ASSEMBLY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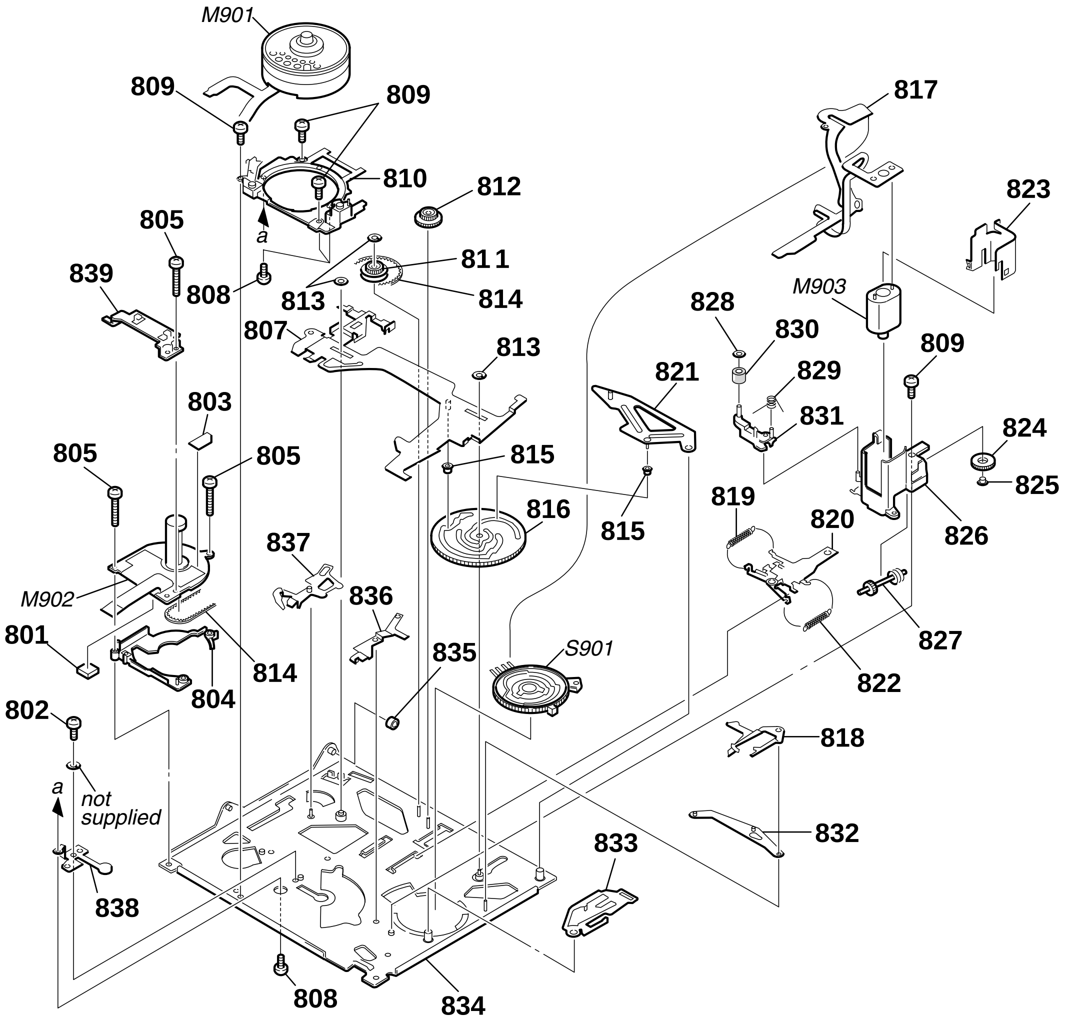
Ref. No.	Part No.	Description	Ref. page No.
751	A-7040-419-A	BASE (S) BLOCK ASSY, GUIDE	
752	A-7040-418-B	BASE (T) BLOCK ASSY, GUIDE	
753	3-965-559-01	STOPPER (T)	
754	3-965-557-01	STOPPER (T), GB	
755	3-965-558-01	STOPPER (S)	
756	3-965-556-01	STOPPER (S), GB	
757	3-965-553-01	RAIL, GUIDE	
758	3-947-503-01	SCREW (M1.4)	
759	3-965-573-01	RETAINER, TG4	
760	1-658-213-11	FP-355 FLEXIBLE BOARD	
761	3-965-552-01	HOLDER (T), SENSOR	
762	1-657-786-13	FP-221 FLEXIBLE BOARD	
763	3-965-551-01	HOLDER (S), SENSOR	
764	1-658-214-11	FP-356 FLEXIBLE BOARD	
765	A-7040-417-A	ARM BLOCK ASSY, TG4	
766	3-965-574-01	SPRING (RETURN, TG4), TORSION	
767	3-965-575-01	SPRING (PINCH), TORSION	
768	3-965-568-11	GUIDE, LOCK	
769	3-965-562-01	SPRING (RATCHET), TENSION	
770	3-965-581-03	RATCHET, T	
771	X-3949-380-1	ARM ASSY (E), PINCH	
772	X-3945-398-2	DECK ASSY, REEL,	
773	3-965-648-01	SPRING (PINCH), TENSION	
774	3-965-579-01	ROLLER, PINCH PRESS	
775	3-965-563-01	GEAR, T SOFT	
776	3-965-565-01	CLAW, T SOFT	
777	X-3945-397-1	DECK ASSY, REEL, S	
778	X-3945-396-1	BAND ASSY, TENSION REGULATOR	
779	3-945-756-01	SCREW (M1.4X3)	
780	3-965-583-01	ARM, RVS	
781	3-965-580-01	SPRING (ARM, RVS), TENSION	
782	3-966-384-01	SPRING, T SOFT	
783	3-965-578-01	SPRING, TENSION COIL	
784	3-965-560-01	RATCHET, S	
785	3-965-561-01	PLATE, RELEASE, S RATCHET	
786	X-3945-395-1	ARM ASSY, TG1	
787	3-965-576-01	SPRING (TG1), TENSION	
788	3-965-567-01	LID OPEN	
789	3-965-566-01	COVER, LS GUIDE	
* 790	3-965-577-01	PLATE, CAM, LS	
791	3-965-569-01	ARM, EJ	
792	A-7040-427-B	CHASSIS (S1) ASSY, LS	
D001	8-719-988-42	DIODE GL453	
S001	1-692-614-11	SWITCH, PUSH (3 KEY) (Hi8 MP, ME/MP, REC PROOF)	
S002	1-572-688-11	SWITCH, PUSH (1 KEY) (C LOCK)	

6-1-11. MECHANISM CHASSIS ASSEMBLY


M901
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M903
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M902
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S901
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not supplied
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Ref. No.	Part No.	Description	Ref. page No.
801	3-987-953-01	SPACER, RUBBER	
802	3-965-550-02	SCREW (M1.7X1.6)	
803	1-657-785-11	FP-248 FLEXIBLE BOARD	
804	3-054-404-01	SPACER, CAPSTAN	
805	3-965-549-01	SCREW (M1.4 X 6.5)	
807	3-971-644-02	SLIDER (2), M	
808	X-3947-895-1	SCREW ASSY, DRUM ATTACHED	
809	3-947-503-01	SCREW (M1.4)	
810	A-7040-494-A	BASE BLOCK ASSY, DRUM	
811	3-965-527-01	GEAR, CHANGE	
812	3-965-544-01	GEAR, RELAY	
813	3-331-007-21	WASHER	
814	3-965-546-01	BELT, TIMING	
815	3-965-533-01	ROLLER, LS	
816	3-965-528-01	GEAR, CAM	
817	1-657-784-11	FP-220 FLEXIBLE BOARD	
818	3-965-529-01	PLATE, REGULATOR, TENSION	
819	3-965-536-01	SPRING (LIMITTER ARM T), COIL	
820	X-3945-388-1	SLIDER ASSY, GL	
821	3-965-532-21	ARM, LS	
822	3-965-535-01	SPRING (LIMITTER ARM S), COIL	
823	3-965-542-01	SHIELD, MOTOR	
824	3-965-539-01	GEAR (A)	
825	3-965-538-01	SLEEVE, MOTOR HOLDER	
826	3-965-540-01	HOLDER, MOTOR	
827	3-965-541-01	SHAFT, WORM	
828	3-321-393-01	WASHER, STOPPER	
829	3-965-724-01	SPRING (RETURN, HC), TORSION	
830	A-7040-423-A	ROLLER BLOCK ASSY, HC	
831	X-3945-407-1	ARM ASSY, HC ROLLER	
832	3-965-531-01	ARM, GL	
833	3-965-530-01	PLATE (2), REGULATOR, TENSION	
834	X-3949-589-3	CHASSIS ASSY, MECHANICAL	
835	3-965-526-02	ROLLER, LS GUIDE	
836	3-965-547-01	ARM, HC DRIVING	
837	3-965-534-01	PLATE, PRESS, PINCH	
838	3-974-320-02	GROUND (IM), SHAFT	
839	3-966-349-01	HOLDER, FLEXIBLE	
M901	A-7048-938-A	DRUM BLOCK ASSY (DKH-02A-R)	
M902	8-835-531-32	MOTOR, DC SCE-0601A/C-NP (CAPSTAN)	
M903	X-3945-401-1	MOTOR ASSY, DC (LOADING)	
S901	1-762-436-15	SWITCH (ENCODER), ROTARY	

6-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked “*” are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

- Abbreviation

AR	: Argentina model	CND	: Canadian model	KR	: Korea model
AUS	: Australian model	EE	: East European model	NE	: North European model
BR	: Brazilian model	HK	: Hong Kong model	RU	: Russian model
CN	: Chinese model	JE	: Tourist model		

Ref. No.	Part No.	Description			Remark
	A-7074-270-A	CD-242 BOARD, COMPLETE			
		(TRV120/TRV120P)			
		************************			
		(Ref. No.: 20, 000 Series)			
		(IC101 is not included in this complete board)			
		< CAPACITOR >			
C102	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C105	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C106	1-113-682-11	TANTALUM CHIP	33uF	20%	10V
C108	1-164-360-11	CERAMIC CHIP	0.1uF		16V
		< CONNECTOR >			
CN101	1-766-346-21	CONNECTOR, FFC/FPC 16P			
		< COIL >			
L102	1-469-528-91	INDUCTOR	100uH		
		< IC >			
IC101	A-7030-821-A	CCD BLOCK ASSY (CCD IMAGER)			
		< TRANSISTOR >			
Q101	8-729-117-73	TRANSISTOR 2SC4178-F13F14-T1			
		< RESISTOR >			
R101	1-216-864-11	METAL CHIP	0	5%	1/16W
R102	1-216-864-11	METAL CHIP	0	5%	1/16W
R103	1-216-827-11	METAL CHIP	3.3K	5%	1/16W
R105	1-216-857-11	METAL CHIP	1M	5%	1/16W
	A-7074-279-A	CD-244 BOARD, COMPLETE			
		(TRV120E/TRV125E)			
	A-7074-286-A	CD-269 BOARD, COMPLETE			
		(TR8000E/TR8100E)			
		**********************			
		(Ref. No.: 20, 000 Series)			
		(IC151is not included in this complete board)			
		< CAPACITOR >			
C151	1-162-964-11	CERAMIC CHIP	0.001uF	10%	50V
C152	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C155	1-113-682-11	TANTALUM CHIP	33uF	20%	10V
C156	1-162-915-11	CERAMIC CHIP	10PF	0.5PF	50V
C157	1-164-360-11	CERAMIC CHIP	0.1uF		16V
C158	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C159	1-127-820-91	CERAMIC	4.7uF		16V
		< CONNECTOR >			
CN151	1-766-346-21	CONNECTOR, FFC/FPC 16P			
		< FERRITE BEAD >			
* FB001	1-500-282-11	INDUCTOR CHIP	0uH		
		< IC >			
IC151	A-7031-072-A	CCD BLOCK ASSY (CCD IMAGER)			
IC152	8-759-561-46	IC AD8014ART-REEL7			
		< COIL >			
L151	1-469-528-91	INDUCTOR	100uH		
L152	1-469-528-91	INDUCTOR	100uH		
		< RESISTOR >			
R151	1-216-808-11	METAL CHIP	82	5%	1/16W
R154	1-216-821-11	METAL CHIP	1K	5%	1/16W
R155	1-216-829-11	METAL CHIP	4.7K	5%	1/16W
R156	1-216-830-11	METAL CHIP	5.6K	5%	1/16W
R157	1-216-864-11	METAL CHIP	0	5%	1/16W
	A-7074-268-A	CF-69 BOARD, COMPLETE			
		(TRV120/TRV120E/TRV120P/TRV125E)			
		*********************			
		(Ref. No.: 20, 000 Series)			
		< BATTERY HOLDER >			
BH001	1-550-104-11	HOLDER, BATTERY			
		< CAPACITOR >			
C001	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V

(Note) Be sure to read “Precautions for Replcement of CCD Imager” on page 4-8, 4-10 when changing the CCD imager

Ref. No.	Part No.	Description	Remark
		< CONNECTOR >	
CN001	1-785-760-11	CONNECTOR, FFC/FPC (ZIF) 45P	
* CN002	1-785-379-01	HOUSING, CONNECTOR	
CN003	1-778-506-21	PIN, CONNECTOR (PC BOARD) 2P	
CN004	1-779-064-11	PIN, CONNECTOR (PC BOARD) 12P	
CN005	1-778-508-21	PIN, CONNECTOR (PC BOARD) 6P	
* CN007	1-778-283-11	CONNECTOR, FFC/FPC 4P	
* CN008	1-580-055-21	PIN, CONNECTOR (SMD) 2P	
		< DIODE >	
D001	8-719-062-16	DIODE 01ZA8.2 (TPL3)	
D005	8-719-069-59	DIODE UDZS-TE17-8.2B	
D006	8-719-069-59	DIODE UDZS-TE17-8.2B	
D008	8-719-027-76	DIODE 1SS357-TPH3	
D009	8-719-016-74	DIODE 1SS352-TPH3	
		< TRANSISTOR >	
Q002	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q003	8-729-230-72	TRANSISTOR 2SA1362-YG-EL	
		< RESISTOR >	
R001	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R002	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R003	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R004	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R005	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R006	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R007	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R008	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R009	1-216-822-11	METAL CHIP 1.2K 5% 1/16W	
R010	1-216-814-11	METAL CHIP 270 5% 1/16W	
R011	1-216-864-11	METAL CHIP 0 5% 1/16W	
R012	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R013	1-216-803-11	METAL CHIP 33 5% 1/16W	
R014	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R015	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R016	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R017	1-216-823-11	METAL CHIP 1.5K 5% 1/16W	
R019	1-216-816-11	METAL CHIP 390 5% 1/16W	
R020	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R021	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R022	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R023	1-216-825-11	METAL CHIP 2.2K 5% 1/16W	
R024	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R025	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R026	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R027	1-216-828-11	METAL CHIP 3.9K 5% 1/16W	
R030	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R031	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R032	1-216-832-11	METAL CHIP 8.2K 5% 1/16W	
R038	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R039	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R040	1-216-838-11	METAL CHIP 27K 5% 1/16W	
R047	1-216-864-11	METAL CHIP 0 5% 1/16W	
R048	1-216-864-11	METAL CHIP 0 5% 1/16W	
R052	1-216-864-11	METAL CHIP 0 5% 1/16W	
R053	1-216-864-11	METAL CHIP 0 5% 1/16W	
R054	1-216-814-11	METAL CHIP 270 5% 1/16W	

Ref. No.	Part No.	Description	Remark
		< SWITCH >	
S001	1-771-138-61	SWITCH, KEY BOARD (DIGITAL EFFECT)	
S003	1-771-138-61	SWITCH, KEY BOARD (PICTURE EFFECT)	
S005	1-771-138-61	SWITCH, KEY BOARD (DATA CODE)	
S006	1-771-025-41	SWITCH, ROTARY (ENCODER) (SEL/PUSH EXEC)	
S007	1-771-138-61	SWITCH, KEY BOARD (MENU)	
S009	1-771-138-61	SWITCH, KEY BOARD (END SEARCH)	
S010	1-771-138-61	SWITCH, KEY BOARD (TITLE)	
S013	1-771-029-21	SWITCH, TACTILE (EXPOSURE)	
S014	1-771-138-61	SWITCH, KEY BOARD (PB ZOOM)	
S016	1-771-138-61	SWITCH, KEY BOARD (DISPLAY)	
S017	1-771-029-21	SWITCH, TACTILE (PROGRAM AE)	
S019	1-771-029-21	SWITCH, TACTILE (BACK LIGHT)	
S020	1-771-029-31	SWITCH, TACTILE (FADER)	

Ref. No.	Part No.	Description	Remark
	A-7074-284-A	CF-71 BOARD, COMPLETE	(TR8000E/TR8100E)
		*********************	
			(Ref. No.: 30, 000 Series)
		< BATTERY HOLDER >	
BH001	1-550-104-11	HOLDER, BATTERY	
		< BUZZER >	
BZ001	1-529-107-11	BUZZER, PIEZOELECTRIC	
		< CAPACITOR >	
C005	1-107-826-91	CERAMIC CHIP 0.1uF 10% 16V	
		< CONNECTOR >	
CN001	1-785-760-11	CONNECTOR, FFC/FPC (ZIF) 45P	
* CN005	1-778-283-11	CONNECTOR, FFC/FPC 4P	
CN006	1-764-532-21	CONNECTOR, FFC/FPC (ZIF) 26P	
* CN008	1-778-283-11	CONNECTOR, FFC/FPC 4P	
		< DIODE >	
D001	8-719-027-76	DIODE 1SS357-TPH3	
D002	8-719-069-59	DIODE UDZS-TE17-8.2B	
D004	8-719-069-59	DIODE UDZS-TE17-8.2B	
D005	8-719-069-59	DIODE UDZS-TE17-8.2B	
D007	8-719-016-74	DIODE 1SS352-TPH3	
D007	8-719-988-61	DIODE 1SS355TE-17	
		< IC >	
IC002	8-759-573-02	IC BU9735K-E2	
		< TRANSISTOR >	
Q002	8-729-230-63	TRANSISTOR 2SC4116YG-TE85L	
Q003	8-729-230-72	TRANSISTOR 2SA1362-YG-EL	
		< RESISTOR >	
R001	1-216-814-11	METAL CHIP 270 5% 1/16W	
R002	1-216-864-11	METAL CHIP 0 5% 1/16W	
R003	1-216-845-11	METAL CHIP 100K 5% 1/16W	
R004	1-216-803-11	METAL CHIP 33 5% 1/16W	
R005	1-216-833-91	RES-CHIP 10K 5% 1/16W	
R006	1-216-833-91	RES-CHIP 10K 5% 1/16W	

Ref. No.	Part No.	Description			Remark
R007	1-216-833-91	RES-CHIP	10K	5%	1/16W
R009	1-216-816-11	METAL CHIP	390	5%	1/16W
R010	1-216-864-11	METAL CHIP	0	5%	1/16W
R011	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R012	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R013	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R016	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R017	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R018	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R019	1-216-855-11	METAL CHIP	680K	5%	1/16W
R020	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R021	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R022	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R023	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R024	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R025	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R026	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R027	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R032	1-216-838-11	METAL CHIP	27K	5%	1/16W
R033	1-216-838-11	METAL CHIP	27K	5%	1/16W
R044	1-216-833-91	RES-CHIP	10K	5%	1/16W
R045	1-216-833-91	RES-CHIP	10K	5%	1/16W
R046	1-216-864-11	METAL CHIP	0	5%	1/16W
R052	1-216-814-11	METAL CHIP	270	5%	1/16W
		< SWITCH >			
S001	1-771-138-61	SWITCH, KEY BOARD (DIGITAL EFFECT)			
S002	1-771-138-61	SWITCH, KEY BOARD (PICTURE EFFECT)			
S003	1-771-138-61	SWITCH, KEY BOARD (DATA CODE)			
S004	1-771-025-41	SWITCH, ROTARY (ENCODER) (SEL/PUSH EXEC)			
S005	1-771-029-21	SWITCH, TACTILE (MENU)			
S006	1-771-029-21	SWITCH, TACTILE (TITLE)			
S007	1-771-029-21	SWITCH, TACTILE (EXPOSURE)			
S008	1-771-138-61	SWITCH, KEY BOARD (PB ZOOM)			
S009	1-771-138-61	SWITCH, KEY BOARD (PROGRAM AE)			
S010	1-771-138-61	SWITCH, KEY BOARD (BACK LIGHT)			
S011	1-771-138-61	SWITCH, KEY BOARD (FADER)			

Ref. No.	Part No.	Description			Remark
		FP-249 BOARD, COMPLETE (Not Supplied) *********************** (Ref. No.: 10, 000 Series)			
	1-658-214-11	FP-356 FLEXIBLE BOARD			
	3-965-551-01	HOLDER (S), SENSOR			
	3-965-552-01	HOLDER (T), SENSOR			
		< HOLE ELEMENT >			
H001	8-719-061-28	DIODE HW-105C-FT-V (S REEL SENSOR)			
H002	8-719-061-28	DIODE HW-105C-FT-V (T REEL SENSOR)			
		< TRANSISTOR >			
Q001	8-729-907-25	PHOTO TRANSISTOR PT4850F (TAPE END)			
Q002	8-729-907-25	PHOTO TRANSISTOR PT4850F (TAPE TOP)			
		< SWITCH >			
S001	1-692-614-11	SWITCH, PUSH (3 KEY) (Hi8 MP, ME/MP, REC PROOF)			
S002	1-572-688-11	SWITCH, PUSH (1 KEY) (C LOCK)			

Ref. No.	Part No.	Description			Remark
	1-658-213-11	FP-355 FLEXIBLE BOARD ********************* (Ref. No.: 10, 000 Series)			
D001	8-719-988-42	DIODE GL453			

Ref. No.	Part No.	Description			Remark
	A-7074-271-A	FU-138 BOARD, COMPLETE (TRV120/TRV120E/TRV120P/TRV125E)			
	A-7074-287-A	FU-143 BOARD, COMPLETE (TR8000E/TR8100E) *********************** (Ref. No.: 20, 000 Series)			
		< CAPACITOR >			
C251	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C252	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C253	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C255	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C256	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C257	1-119-751-11	TANTALUM CHIP	22uF	20%	16V
C261	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
		< CONNECTOR >			
* CN252	1-580-756-21	PIN, CONNECTOR (SMD) 7P			
CN253	1-691-485-21	CONNECTOR, FFC/FPC 6P			
CN254	1-794-174-21	CONNECTOR BOARD TO BOARD 42P			
		< DIODE >			
D251	8-719-069-59	DIODE UDZS-TE17-8.2B			
D252	8-719-027-76	DIODE 1SS357-TPH3			
D253	8-719-062-16	DIODE 01ZA8.2 (TPL3)			
D256	8-719-027-76	DIODE 1SS357-TPH3			
D257	8-719-016-74	DIODE 1SS352-TPH3			
D560	8-719-016-74	DIODE 1SS352-TPH3			
		< FUSE >			
⚠F251	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)			
⚠F252	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)			
⚠F254	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)			
⚠F256	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)			
⚠F257	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V) (TRV120/TRV120P/TRV120E/TRV125E)			
⚠F258	1-576-406-21	FUSE, MICRO (1608) (1.4A/32V)			
		< COIL >			
L251	1-412-056-11	INDUCTOR CHIP 4.7Uh (TRV120/TRV120E/TRV120P/TRV125E)			
		< TRANSISTOR >			
Q251	8-729-047-68	TRANSISTOR SSM3K03FE (TPL3)			
Q252	8-729-051-49	TRANSISTOR TPC8305 (TE12L)			
Q253	8-729-804-41	TRANSISTOR 2SB1122-ST-TD			
Q254	8-729-042-29	TRANSISTOR RN1104F (TPL3)			
Q255	8-729-047-68	TRANSISTOR SSM3K03FE (TPL3)			
Q256	8-729-042-29	TRANSISTOR RN1104F (TPL3)			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description			Remark
Q257	8-729-042-56	TRANSISTOR	MGSF3455VT1		
		< RESISTOR >			
R251	1-216-821-11	METAL CHIP	1K	5%	1/16W
R252	1-216-296-91	SHORT	0		
R253	1-216-296-91	SHORT	0		
R254	1-216-853-11	METAL CHIP	470K	5%	1/16W
R255	1-216-857-11	METAL CHIP	1M	5%	1/16W
R256	1-216-150-91	RES-CHIP	10	5%	1/8W
R257	1-216-821-11	METAL CHIP	1K	5%	1/16W
R258	1-216-831-11	METAL CHIP	6.8K	5%	1/16W
R259	1-216-841-11	METAL CHIP	47K	5%	1/16W
R260	1-216-833-91	RES-CHIP	10K	5%	1/16W
R261	1-216-857-11	METAL CHIP	1M	5%	1/16W
R263	1-216-821-11	METAL CHIP	1K	5%	1/16W

Ref. No.	Part No.	Description			Remark
	A-7074-267-A	MI-37 BOARD, COMPLETE			
					(TRV120/TRV120P)
	A-7074-277-A	MI-37 BOARD, COMPLETE			
					(TRV120E/TRV125E/TR8000E/TR8100E)
		*********************			
					(Ref. No.: 10, 000 Series)
		< CAPACITOR >			
C3900	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3901	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
					(TRV120E/TRV125E/TR8000E/TR8100E)
C3902	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
					(TRV120/TRV120P)
C3903	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
					(TRV120/TRV120P)
C3904	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3905	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C3906	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C3907	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3908	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3909	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3910	1-119-660-11	TANTALUM CHIP	4.7uF	20%	6.3V
C3911	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3912	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3913	1-164-668-11	CERAMIC CHIP	510PF	5%	50V
C3914	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3915	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3916	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3917	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C3918	1-164-844-11	CERAMIC CHIP	4PF	0.25PF	16V
C3919	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C3920	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C3921	1-164-862-11	CERAMIC CHIP	33PF	5%	16V
C3922	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3923	1-164-864-11	CERAMIC CHIP	39PF	5%	16V
C3924	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3925	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C3926	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3927	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3928	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C3929	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3931	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3933	1-107-686-11	TANTALUM CHIP	4.7uF	20%	16V
C3934	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3935	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3936	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5806	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5807	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C5808	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C5809	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5810	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5812	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C5813	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C5814	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C5815	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C5816	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C5817	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C5819	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C5820	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C5822	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5823	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5824	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5825	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5826	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C5827	1-110-563-11	CERAMIC CHIP	0.068uF	10%	16V
C5829	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C5830	1-164-227-11	CERAMIC CHIP	0.022uF	10%	25V
C5832	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C5833	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C5835	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C5836	1-164-245-11	CERAMIC CHIP	0.015uF	10%	25V
C5838	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5839	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C5840	1-165-128-11	CERAMIC CHIP	0.22uF		16V
C5841	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
		< CONNECTOR >			
CN5801	1-766-344-21	CONNECTOR, FFC/FPC 14P			
* CN5802	1-695-320-21	PIN, CONNECTOR (1.5mm) (SMD) 2P			
* CN5803	1-695-320-21	PIN, CONNECTOR (1.5mm) (SMD) 2P			
CN5804	1-794-053-21	CONNECTOR, FFC/FPC (LIF) 32P			
		< DIODE >			
D3900	8-719-073-01	DIODE	MA111- (K8) .S0		
D3901	8-719-074-30	DIODE	SML-310LTT86		
D3903	8-719-060-65	DIODE	DAC3825		
D3904	8-719-078-23	DIODE	DCR2815		
D5806	8-719-062-16	DIODE	01ZA8.2 (TPL3)		
D5807	8-719-069-59	DIODE	UDZS-TE17-8.2B		
		< FUSE >			
⚠F3900	1-533-874-11	FUSE, MICRO (200mA/24V)			
		< IC >			
IC3900	8-749-012-83	IC	PNA4S13M01S0		
IC3901	8-759-498-52	IC	LA9511W-TBM (TRV120/TRV120P)		
IC3901	8-759-566-96	IC	AN2920FHQ-EB		
			(TRV120E/TRV125E/TRV8000E/TRV8100E)		
IC5801	8-759-638-50	IC	AN2901FHQ-EB		

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Ref. No.	Part No.	Description			Remark
		< COIL >			
L3900	1-469-525-91	INDUCTOR	10uH		
L3901	1-469-525-91	INDUCTOR	10uH		
L3902	1-412-948-11	INDUCTOR	5.6uH		
L3903	1-412-957-11	INDUCTOR	33uH		
L3904	1-412-957-11	INDUCTOR	33uH		
L5701	1-414-754-11	INDUCTOR	10uH		
L5803	1-412-961-11	INDUCTOR	68uH		
		< TRANSISTOR >			
Q3901	8-729-140-75	TRANSISTOR	2SD999-T1-CLCK		
Q3902	8-729-122-63	TRANSISTOR	2SA1226-T1E4		
Q3903	8-729-037-53	TRANSISTOR	2SA1832F-Y/GR (TPL3)		
		< RESISTOR >			
R3900	1-218-990-11	SHORT	0		
R3901	1-218-951-11	RES-CHIP	680	5%	1/16W
R3902	1-216-001-00	METAL CHIP	10	5%	1/10W
R3903	1-218-968-11	RES-CHIP	18K	5%	1/16W
R3904	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3905	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3906	1-216-800-11	RES-CHIP	18	5%	1/16W
R3908	1-218-967-11	RES-CHIP	15K	5%	1/16W
R3909	1-218-989-11	RES-CHIP	1M	5%	1/16W
R3910	1-218-990-11	SHORT	0		
R3911	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R3912	1-218-947-11	RES-CHIP	330	5%	1/16W
R3913	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3916	1-218-949-11	RES-CHIP	470	5%	1/16W
R3917	1-218-979-11	RES-CHIP	150K	5%	1/16W
R3918	1-218-979-11	RES-CHIP	150K	5%	1/16W
R3919	1-218-950-11	RES-CHIP	560	5%	1/16W
R3920	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R3921	1-218-949-11	RES-CHIP	470	5%	1/16W
R3922	1-218-972-11	RES-CHIP	39K	5%	1/16W
R3923	1-218-949-11	RES-CHIP	470	5%	1/16W
R3924	1-218-949-11	RES-CHIP	470	5%	1/16W
R3936	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R3938	1-218-990-11	SHORT	0		
R3939	1-218-990-11	SHORT	0		
R5801	1-218-971-11	RES-CHIP	33K	5%	1/16W
R5802	1-218-968-11	RES-CHIP	18K	5%	1/16W
R5803	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R5804	1-216-864-11	METAL CHIP	0	5%	1/16W
R5805	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R5806	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5807	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R5809	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R5814	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R5815	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5816	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5817	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
R5818	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
R5819	1-218-966-11	RES-CHIP	12K	5%	1/16W
R5820	1-218-969-11	RES-CHIP	22K	5%	1/16W
R5821	1-218-966-11	RES-CHIP	12K	5%	1/16W
R5822	1-218-969-11	RES-CHIP	22K	5%	1/16W
R5823	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R5824	1-218-990-11	SHORT	0		
R5825	1-218-990-11	SHORT	0		
R5826	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R5827	1-218-968-11	RES-CHIP	18K	5%	1/16W
R5828	1-218-968-11	RES-CHIP	18K	5%	1/16W
R5829	1-218-971-11	RES-CHIP	33K	5%	1/16W
R5831	1-218-990-11	SHORT	0		
R5834	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5835	1-218-990-11	SHORT	0		
R5836	1-218-990-11	SHORT	0		
R5837	1-218-990-11	SHORT	0		
R5840	1-218-990-11	SHORT	0		
R5841	1-218-990-11	SHORT	0		
R5845	1-218-947-11	RES-CHIP	330	5%	1/16W
		< VARISTOR >			
VDR801	1-801-862-11	VARISTOR, CHIP			
VDR803	1-801-862-11	VARISTOR, CHIP			

	A-7074-272-A	PD-117 (TYPE S 61K) BOARD, COMPLETE			
					(TRV120/TRV120P)
	A-7074-280-A	PD-117 (TYPE S 123K) BOARD, COMPLETE			
					(TRV120E: AEP, UK, EE, NE, RU/TRV125E)
		************************************			
					(Ref. No.: 20, 000 Series)
		< CAPACITOR >			
C5501	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C5503	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5504	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5507	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5508	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5509	1-107-687-11	TANTALUM CHIP	3.3uF	20%	20V
C5510	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5511	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C5512	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5513	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5514	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C5515	1-164-357-11	CERAMIC CHIP	1000PF	5%	50V
C5516	1-162-927-11	CERAMIC CHIP	100PF	5%	50V
					(TRV120/TRV120P)
C5516	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
					(TRV120E: AEP, UK, EE, NE, RU/TRV125E)
C5517	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C5518	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C5519	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C5520	1-113-994-11	TANTALUM CHIP	6.8uF	20%	16V
C5521	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C5522	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5523	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C5524	1-107-682-11	CERAMIC CHIP	1uF	10%	16V
C5527	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5528	1-135-177-21	TANTALUM CHIP	1uF	20%	20V
C5529	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C5530	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5531	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5602	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C5603	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C5604	1-164-657-11	CERAMIC CHIP	0.015u	10%	50V
C5605	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description			Remark
C5606	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
⚠C5607	1-131-959-91	CERAMIC CHIP	12PF	10%	3KV
C5608	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C5704	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
		< CONNECTOR >			
CN5501	1-573-364-11	CONNECTOR, FFC/FPC 24P			
* CN5502	1-573-984-11	CONNECTOR, BOARD TO BOARD 10P			
CN5604	1-764-709-11	CONNECTOR, FFC/FPC (LIF) 10P			
CN5701	1-779-893-11	PIN, CONNECTOR (PC BOARD) 8P			
CN5702	1-779-064-11	PIN, CONNECTOR (PC BOARD) 12P			
CN5703	1-691-344-11	CONNECTOR, FFC/FPC (ZIF) 6P			
CN5704	1-778-508-21	PIN, CONNECTOR (PC BOARD) 6P			
CN5705	1-764-532-21	CONNECTOR, FFC/FPC (ZIF) 26P			
		< DIODE >			
D5502	8-713-102-80	DIODE 1T369-01-T8A			
D5503	8-719-073-01	DIODE MA111- (K8) .S0			
⚠D5601	8-719-073-01	DIODE MA111- (K8) .S0			
D5602	8-719-062-44	DIODE PG1112H-TR			
		< FERRITE BEAD >			
FB5502	1-414-760-21	FERRITE	0uH		
FB5503	1-414-760-21	FERRITE	0uH		
		< IC >			
IC5501	8-759-591-94	IC RB5P0030M1			
IC5502	8-759-660-91	IC LZ9FF424			
IC5503	8-759-478-92	IC TC7SET04FU (TE85R)			
IC5601	8-759-564-49	IC TC7W53FU (TE12R)			
IC5602	8-759-075-70	IC TA75S393F-TE85R			
IC5701	8-759-573-02	IC BU9735K-E2			
		< COIL >			
L5501	1-469-525-91	INDUCTOR	10uH		
L5504	1-469-525-91	INDUCTOR	10uH		
L5505	1-412-956-21	INDUCTOR	27uH (TRV120/TRV120P)		
L5505	1-412-949-21	INDUCTOR	6.8uH		
		(TRV120E: AEP, UK, EE, NE, RU/TRV125E)			
L5601	1-419-387-21	INDUCTOR	100uH		
		< TRANSISTOR >			
Q5501	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)			
Q5502	8-729-041-23	TRANSISTOR MGSF1P02LT1			
Q5503	8-729-037-53	TRANSISTOR 2SB1462J-QR (K8) .SO			
Q5504	8-729-037-53	TRANSISTOR 2SB1462J-QR (K8) .SO			
Q5505	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)			
Q5506	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)			
Q5601	8-729-042-29	TRANSISTOR RN1104F (TPL3)			
Q5602	8-729-039-43	TRANSISTOR FP216-TL			
Q5603	8-729-042-29	TRANSISTOR RN1104F (TPL3)			
Q5604	8-729-042-58	TRANSISTOR RN2102F (TPL3)			
		< RESISTOR >			
R5501	1-216-853-11	METAL CHIP	470K	5%	1/16W
R5503	1-218-895-11	METAL CHIP	100K	0.5%	1/16W
R5504	1-216-845-11	METAL CHIP	100K	5%	1/16W
R5505	1-216-835-11	METAL CHIP	15K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R5506	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R5507	1-216-841-11	METAL CHIP	47K	5%	1/16W
R5508	1-216-843-11	METAL CHIP	68K	5%	1/16W
R5509	1-216-837-11	METAL CHIP	22K	5%	1/16W
R5510	1-216-843-11	METAL CHIP	68K	5%	1/16W
R5511	1-216-857-11	METAL CHIP	1M	5%	1/16W
R5512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R5513	1-216-857-11	METAL CHIP	1M	5%	1/16W
R5515	1-216-864-11	METAL CHIP	0	5%	1/16W
R5516	1-216-833-91	RES-CHIP	10K	5%	1/16W
R5519	1-216-864-11	METAL CHIP	0	5%	1/16W
R5520	1-216-864-11	METAL CHIP	0	5%	1/16W
R5521	1-216-864-11	METAL CHIP	0	5%	1/16W
R5523	1-216-809-11	METAL CHIP	100	5%	1/16W
R5524	1-216-809-11	METAL CHIP	100	5%	1/16W
R5525	1-216-809-11	METAL CHIP	100	5%	1/16W
R5551	1-216-841-11	METAL CHIP	47K	5%	1/16W
R5553	1-216-821-11	METAL CHIP	1K	5%	1/16W
					(TRV120/TRV120P)
R5553	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
		(TRV120E: AEP, UK, EE, NE, RU/TRV125E)			
R5557	1-216-864-11	METAL CHIP	0	5%	1/16W
R5560	1-216-853-11	METAL CHIP	470K	5%	1/16W
R5562	1-216-833-91	RES-CHIP	10K	5%	1/16W
R5563	1-216-841-11	METAL CHIP	47K	5%	1/16W
R5564	1-216-857-11	METAL CHIP	1M	5%	1/16W
R5565	1-216-857-11	METAL CHIP	1M	5%	1/16W
R5569	1-216-848-11	METAL CHIP	180K	5%	1/16W
R5608	1-216-864-11	METAL CHIP	0	5%	1/16W
R5609	1-216-833-91	RES-CHIP	10K	5%	1/16W
R5610	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R5611	1-216-845-11	METAL CHIP	100K	5%	1/16W
R5612	1-216-834-11	METAL CHIP	12K	5%	1/16W
R5613	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R5614	1-216-833-91	RES-CHIP	10K	5%	1/16W
R5616	1-216-810-11	METAL CHIP	120	5%	1/16W
R5617	1-216-837-11	METAL CHIP	22K	5%	1/16W
R5618	1-216-817-11	METAL CHIP	470	5%	1/16W
R5702	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R5704	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R5706	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R5707	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R5708	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R5711	1-216-864-11	METAL CHIP	0	5%	1/16W
R5712	1-216-855-11	METAL CHIP	680K	5%	1/16W
R5714	1-216-864-11	METAL CHIP	0	5%	1/16W
		< SWITCH >			
S5701	1-692-088-41	SWITCH, TACTILE (LCD BRIGHT +)			
S5702	1-692-088-41	SWITCH, TACTILE (LCD BRIGHT -)			
S5703	1-692-088-41	SWITCH, TACTILE (VOLUME +)			
S5704	1-692-088-41	SWITCH, TACTILE (VOLUME -)			
		< TRANSFORMER >			
⚠T5601	1-435-226-11	TRANSFORMER, INVERTER			

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-117 (TYPE C)

Ref. No.	Part No.	Description	Remark
	A-7074-290-A	PD-117 (TYPE C) BOARD, COMPLETE (TRV120E: E, HK, AUS, CN, JE)	
		*******************************	
		(Ref. No.: 20, 000 Series)	
		< CAPACITOR >	
C5501	1-135-259-11	TANTALUM CHIP 10uF 20%	6.3V
C5503	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5504	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5505	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C5506	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C5507	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C5508	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5509	1-107-687-11	TANTALUM CHIP 3.3uF 20%	20V
C5510	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5511	1-164-739-11	CERAMIC CHIP 560PF 5%	50V
C5512	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5513	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5514	1-119-750-11	TANTALUM CHIP 22uF 20%	6.3V
C5515	1-164-357-11	CERAMIC CHIP 1000PF 5%	50V
C5516	1-164-217-11	CERAMIC CHIP 150PF 5%	50V
C5517	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C5518	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C5519	1-164-004-11	CERAMIC CHIP 0.1uF 10%	25V
C5520	1-113-994-11	TANTALUM CHIP 6.8uF 20%	16V
C5521	1-107-682-11	CERAMIC CHIP 1uF 10%	16V
C5522	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5523	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5524	1-107-682-11	CERAMIC CHIP 1uF 10%	16V
C5527	1-162-970-11	CERAMIC CHIP 0.01uF 10%	25V
C5529	1-107-725-11	CERAMIC CHIP 0.1uF 10%	16V
C5602	1-104-851-11	TANTALUM CHIP 10uF 20%	10V
C5603	1-109-982-11	CERAMIC CHIP 1uF 10%	10V
C5604	1-164-657-11	CERAMIC CHIP 0.015uF 10%	50V
C5605	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
C5606	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
⚠C5607	1-131-959-91	CERAMIC CHIP 12PF 10%	3KV
C5608	1-104-851-11	TANTALUM CHIP 10uF 20%	10V
C5704	1-107-826-91	CERAMIC CHIP 0.1uF 10%	16V
		< CONNECTOR >	
CN5501	1-573-364-11	CONNECTOR, FFC/FPC 24P	
* CN5502	1-573-984-11	CONNECTOR, BOARD TO BOARD 10P	
CN5604	1-764-709-11	CONNECTOR, FFC/FPC (LIF) 10P	
CN5701	1-779-893-11	PIN, CONNECTOR (PC BOARD) 8P	
CN5702	1-779-064-11	PIN, CONNECTOR (PC BOARD) 12P	
CN5703	1-691-344-11	CONNECTOR, FFC/FPC (ZIF) 6P	
CN5704	1-778-508-21	PIN, CONNECTOR (PC BOARD) 6P	
CN5705	1-764-532-21	CONNECTOR, FFC/FPC (ZIF) 26P	
		< DIODE >	
D5502	8-713-102-80	DIODE 1T369-01-T8A	
⚠D5601	8-719-073-01	DIODE MA111- (K8) .S0	
D5602	8-719-062-44	DIODE PG1112H-TR	
		< FERRITE BEAD >	
FB5502	1-414-760-21	FERRITE 0uH	
FB5503	1-414-760-21	FERRITE 0uH	
		< IC >	
IC5501	8-759-591-94	IC RB5P0030M1	
IC5502	8-759-591-93	IC CM7019L3-T4	
IC5601	8-759-564-49	IC TC7W53FU (TE12R)	
IC5602	8-759-075-70	IC TA75S393F-TE85R	
IC5701	8-759-573-02	IC BU9735K-E2	
		< COIL >	
L5501	1-469-525-91	INDUCTOR 10uH	
L5504	1-469-525-91	INDUCTOR 10uH	
L5505	1-412-956-21	INDUCTOR 27uH	
L5601	1-419-387-21	INDUCTOR 100uH	
		< TRANSISTOR >	
Q5501	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q5601	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q5602	8-729-039-43	TRANSISTOR FP216-TL	
Q5603	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q5604	8-729-042-58	TRANSISTOR RN2102F (TPL3)	
		< RESISTOR >	
R5501	1-216-853-11	METAL CHIP 470K 5%	1/16W
R5503	1-218-895-11	METAL CHIP 100K 0.5%	1/16W
R5504	1-216-845-11	METAL CHIP 100K 5%	1/16W
R5505	1-216-835-11	METAL CHIP 15K 5%	1/16W
R5506	1-216-826-11	METAL CHIP 2.7K 5%	1/16W
R5507	1-216-841-11	METAL CHIP 47K 5%	1/16W
R5508	1-216-843-11	METAL CHIP 68K 5%	1/16W
R5509	1-216-837-11	METAL CHIP 22K 5%	1/16W
R5510	1-216-843-11	METAL CHIP 68K 5%	1/16W
R5511	1-216-857-11	METAL CHIP 1M 5%	1/16W
R5512	1-216-845-11	METAL CHIP 100K 5%	1/16W
R5514	1-216-864-11	METAL CHIP 0 5%	1/16W
R5516	1-216-833-91	RES-CHIP 10K 5%	1/16W
R5517	1-216-849-11	METAL CHIP 220K 5%	1/16W
R5518	1-216-864-11	METAL CHIP 0 5%	1/16W
R5519	1-216-864-11	METAL CHIP 0 5%	1/16W
R5520	1-216-864-11	METAL CHIP 0 5%	1/16W
R5522	1-216-864-11	METAL CHIP 0 5%	1/16W
R5523	1-216-809-11	METAL CHIP 100 5%	1/16W
R5524	1-216-809-11	METAL CHIP 100 5%	1/16W
R5525	1-216-809-11	METAL CHIP 100 5%	1/16W
R5551	1-216-841-11	METAL CHIP 47K 5%	1/16W
R5553	1-216-823-11	METAL CHIP 1.5K 5%	1/16W
R5557	1-216-864-11	METAL CHIP 0 5%	1/16W
R5559	1-216-864-11	METAL CHIP 0 5%	1/16W
R5560	1-216-853-11	METAL CHIP 470K 5%	1/16W
R5566	1-216-864-11	METAL CHIP 0 5%	1/16W
R5567	1-216-864-11	METAL CHIP 0 5%	1/16W
R5568	1-216-864-11	METAL CHIP 0 5%	1/16W
R5608	1-216-864-11	METAL CHIP 0 5%	1/16W
R5609	1-216-833-91	RES-CHIP 10K 5%	1/16W
R5610	1-216-055-00	METAL CHIP 1.8K 5%	1/10W
R5611	1-216-845-11	METAL CHIP 100K 5%	1/16W
R5612	1-216-834-11	METAL CHIP 12K 5%	1/16W
R5613	1-216-055-00	METAL CHIP 1.8K 5%	1/10W
R5614	1-216-833-91	RES-CHIP 10K 5%	1/16W

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Ref. No.	Part No.	Description			Remark
R5616	1-216-810-11	METAL CHIP	120	5%	1/16W
R5617	1-216-837-11	METAL CHIP	22K	5%	1/16W
R5618	1-216-817-11	METAL CHIP	470	5%	1/16W
R5702	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R5704	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R5706	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R5707	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R5708	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R5711	1-216-864-11	METAL CHIP	0	5%	1/16W
R5712	1-216-855-11	METAL CHIP	680K	5%	1/16W
R5714	1-216-864-11	METAL CHIP	0	5%	1/16W
		< SWITCH >			
S5701	1-692-088-41	SWITCH, TACTILE (LCD BRIGHT +)			
S5702	1-692-088-41	SWITCH, TACTILE (LCD BRIGHT -)			
S5703	1-692-088-41	SWITCH, TACTILE (VOLUME +)			
S5704	1-692-088-41	SWITCH, TACTILE (VOLUME -)			
		< TRANSFORMER >			
⚠T5601	1-435-226-11	TRANSFORMER, INVERTER			
	A-7074-269-A	SE-104 BOARD, COMPLETE (TRV120/TRV120P)			
	A-7074-278-A	SE-104 BOARD, COMPLETE (TRV120E/TRV125E)			
	A-7074-285-A	SE-113 BOARD, COMPLETE (TR8000E/TR8100E)			
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		(Ref. No.: 20, 000 Series)			
		< CAPACITOR >			
C201	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C202	1-164-004-11	CERAMIC CHIP	0.1uF	10%	25V
C203	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C204	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C207	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C208	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C209	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C210	1-110-666-11	ELECT CHIP	22uF	20%	6.3V
C211	1-164-343-11	CERAMIC CHIP	0.056uF	10%	25V
C212	1-110-666-11	ELECT CHIP	22uF	20%	6.3V
C214	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C220	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C221	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C223	1-803-974-21	VARISTOR, CHIP (Note)			
C225	1-803-974-21	VARISTOR, CHIP (Note)			
C226	1-803-974-21	VARISTOR, CHIP (Note)			
		< CONNECTOR >			
CN201	1-779-369-11	CONNECTOR, SQUARE TYPE (INDI) 4P (DV IN/OUT) (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)			
CN201	1-779-369-11	CONNECTOR, SQUARE TYPE (INDI) 4P (DV OUT) (TRV120E: AEP, UK, EE, NE, RU/ TRV125E/TR8000E/TR8100E)			
CN202	1-573-368-11	CONNECTOR, FFC/FPC 28P			
		< DIODE >			
D211	8-719-069-59	DIODE UDZS-TE17-8.2B			
D212	8-719-069-59	DIODE UDZS-TE17-8.2B			
		< IC >			
IC201	8-759-489-19	IC NJM3230V (TE2)			
		< JACK >			
J201	1-694-651-11	TERMINAL BOARD (S VIDEO ID-2) (AUDIO/VIDEO ID-2)			
J202	1-793-995-11	JACK, SUPER SMALL TYPE (LANC)			
		< COIL >			
L201	1-469-525-91	INDUCTOR	10uH		
		< RESISTOR >			
R201	1-216-837-11	METAL CHIP	22K	5%	1/16W
R202	1-216-837-11	METAL CHIP	22K	5%	1/16W
R203	1-216-837-11	METAL CHIP	22K	5%	1/16W
R204	1-216-837-11	METAL CHIP	22K	5%	1/16W
R205	1-216-864-11	METAL CHIP	0	5%	1/16W
R206	1-216-857-11	METAL CHIP	1M	5%	1/16W
R207	1-216-833-91	RES-CHIP	10K	5%	1/16W
R208	1-216-833-91	RES-CHIP	10K	5%	1/16W
R209	1-216-857-11	METAL CHIP	1M	5%	1/16W
R211	1-216-835-11	METAL CHIP	15K	5%	1/16W
R212	1-216-864-11	METAL CHIP	0	5%	1/16W
R213	1-216-864-11	METAL CHIP	0	5%	1/16W
R214	1-216-864-11	METAL CHIP	0	5%	1/16W
R215	1-216-295-91	SHORT	0		
R217	1-216-295-91	SHORT	0		
R218	1-216-864-11	METAL CHIP	0	5%	1/16W
R219	1-216-864-11	METAL CHIP	0	5%	1/16W
R220	1-216-864-11	METAL CHIP	0	5%	1/16W
R224	1-216-864-11	METAL CHIP	0	5%	1/16W
R225	1-216-864-11	METAL CHIP	0	5%	1/16W
R226	1-216-864-11	METAL CHIP	0	5%	1/16W
		< SENSOR >			
SE201	1-803-042-31	SENSOR, ANGULAR VELOCITY (PITCH SENSOR) (TRV120/TRV120P)			
SE201	1-418-252-11	SENSOR, ANGULAR VELOCITY (PITCH SENSOR) (TRV120E/TRV125E/ TR8000E/TR8100E)			
SE202	1-803-042-41	SENSOR, ANGULAR VELOCITY (YAW SENSOR) (TRV120/TRV120P)			
SE202	1-418-252-21	SENSOR, ANGULAR VELOCITY (YAW SENSOR) (TRV120E/TRV125E/TR8000E/TR8100E)			
		< VARISTOR >			
VDR001	1-801-923-11	VARISTOR, CHIP			

Note: Varistors are mounted to the location where C223, C225 and C226 are printed

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

VC-235

Ref. No.	Part No.	Description			Remark
	A-7094-782-A	VC-235 BOARD, COMPLETE (SERVICE)			
					(TRV120/TRV120P)
	A-7094-783-A	VC-235 BOARD, COMPLETE (SERVICE)			
					(TRV120E/TRV125E)
	A-7094-784-A	VC-235 BOARD, COMPLETE (SERVICE)			
					(TR8000E/TR8100E)
		**********************			
					(Ref. No.: 10, 000 Series)
		< CAPACITOR >			
C1101	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
					(Note 1)
C1301	1-164-933-11	CERAMIC CHIP	220PF	10%	16V
C1302	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1303	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1304	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1305	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C1306	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1307	1-164-940-11	CERAMIC CHIP	0.0033uF	10%	16V
C1308	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C1309	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C1310	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C1311	1-164-938-11	CERAMIC CHIP	0.0015uF	10%	16V
C1312	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C1313	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1314	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C1315	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1316	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1317	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1318	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1319	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1320	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C1321	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C1322	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C1323	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C1326	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C1327	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C1328	1-162-974-11	CERAMIC CHIP	0.01uF		50V
C1329	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C1330	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C1331	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C1332	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
					(TRV120/TRV120E/TRV120P/TRV125E)
C1333	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C1334	1-135-157-21	TANTALUM CHIP	10	20%	6.3V
C1335	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C1336	1-119-750-11	TANTALUM CHIP	22uF	20%	6.3V
C1337	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C1338	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C1339	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
					(TRV120/TRV120E/TRV120P/TRV125E)
C1340	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C1341	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C1342	1-165-319-11	CERAMIC CHIP	0.1uF		50V
C1343	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C1344	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
					(TRV120/TRV120E/TRV120P/TRV125E)
C1345	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C1346	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C1347	1-135-216-11	TANTALUM CHIP	10uF	20%	10V
					(TRV120/TRV120E/TRV120P/TRV125E)
C1348	1-135-157-21	TANTALUM CHIP	10uF	20%	6.3V
C1350	1-113-985-11	TANTALUM CHIP	10uF	20%	20V
C1351	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
					(TRV120/TRV120E/TRV120P/TRV125E)
C1352	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1353	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1354	1-113-985-11	TANTALUM CHIP	10uF	20%	20V
C1355	1-164-505-11	CERAMIC CHIP	2.2uF		16V
					(TRV120/TRV120E/TRV120P/TRV125E)
C1356	1-164-505-11	CERAMIC CHIP	2.2uF		16V
					(TRV120/TRV120E/TRV120P/TRV125E)
C1357	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C1359	1-164-506-11	CERAMIC CHIP	4.7uF		16V
C1501	1-164-858-11	CERAMIC CHIP	22PF	5%	16V
C1502	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1503	1-164-858-11	CERAMIC CHIP	22PF	5%	16V
C1504	1-115-156-11	CERAMIC CHIP	1uF		10V
					(TRV120/TRV120P) (Note 2)
C1505	1-115-156-11	CERAMIC CHIP	1uF		10V
C1506	1-107-686-11	TANTALUM CHIP	4.7uF	20%	16V
C1507	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C1508	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1509	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1511	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C1512	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1513	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C1514	1-162-925-11	CERAMIC CHIP	68PF	5%	50V
					(TRV120/TRV120P)
C1514	1-162-921-11	CERAMIC CHIP	33PF	5%	50V
					(TRV120E/TRV125E/TR8000E/TR8100E)
C1515	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C1516	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C1517	1-162-928-11	CERAMIC CHIP	120PF	5%	50V
C1518	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1519	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C1520	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1521	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1522	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1523	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1524	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C1525	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1552	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1554	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C1556	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C1558	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C1559	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C1560	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C1561	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1562	1-164-489-11	CERAMIC CHIP	0.22uF	10%	16V
C1563	1-125-839-91	TANTALUM CHIP	47uF	20%	6.3V
C1564	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C1565	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C1566	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1568	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C1569	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C1570	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C1571	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V

Note 1: C1101 is mounted on the board with suffix number 12 (22, 32) and 13 (23, 33)

Note 2: C1504 is mounted on the board with suffix number 13 (23, 33)

Ref. No.	Part No.	Description			Remark
C1572	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2201	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2202	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C2203	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2204	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C2208	1-164-392-11	CERAMIC CHIP	390PF	5%	50V
C2210	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2211	1-119-660-11	TANTALUM CHIP	4.7uF	20%	6.3V
C2212	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2213	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2214	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C2215	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2222	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C2223	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C2224	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C2225	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2226	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2227	1-107-823-11	CERAMIC CHIP	0.47uF	10%	16V
C2228	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C2229	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2230	1-164-938-11	CERAMIC CHIP	0.0015uF	10%	16V
C2232	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C2233	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2234	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2236	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C2238	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2240	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2242	1-115-156-11	CERAMIC CHIP	1uF		10V
C2243	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2244	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2247	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C2250	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C2291	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C2292	1-104-852-11	TANTALUM CHIP	22uF	20%	6.3V
C2293	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3102	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3104	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3105	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3107	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3108	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C3109	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3110	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3111	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3112	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C3113	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3114	1-164-866-11	CERAMIC CHIP	47PF	5%	16V
C3115	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3116	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C3117	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C3118	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3119	1-164-866-11	CERAMIC CHIP	47PF	5%	16V
C3120	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3121	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3122	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3123	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C3124	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C3126	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3127	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3128	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3131	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3133	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3134	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3135	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C3136	1-164-872-11	CERAMIC CHIP	82PF	5%	16V
C3137	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3138	1-164-874-11	CERAMIC CHIP	100PF	5%	16V
C3139	1-164-878-11	CERAMIC CHIP	150PF	5%	16V
C3141	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C3142	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C3143	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C3144	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C3201	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3202	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3203	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3204	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3205	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3206	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3207	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3208	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3210	1-164-941-11	CERAMIC CHIP	0.0047uF	10%	16V
C3211	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3212	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3213	1-165-176-11	CERAMIC CHIP	0.047uF	10%	16V
C3214	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3215	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3216	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3217	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3218	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3301	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C3302	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C3303	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C3305	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C3306	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3307	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	16V
C3308	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	16V
C3309	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3310	1-127-760-91	CERAMIC CHIP	4.7uF	10%	6.3V
C3311	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3312	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3313	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3314	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3315	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3316	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3317	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3318	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3319	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3320	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C3321	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3322	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C3323	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3324	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C3325	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C3326	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3327	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C3328	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3329	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3331	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C3332	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3333	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C3334	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description			Remark
C3335	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3337	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3338	1-164-882-11	CERAMIC CHIP	220PF	5%	16V
C3342	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3343	1-127-760-91	CERAMIC CHIP	4.7uF	10%	6.3V
C3345	1-127-760-91	CERAMIC CHIP	4.7uF	10%	6.3V
C3346	1-127-760-91	CERAMIC CHIP	4.7uF	10%	6.3V
C3348	1-127-760-91	CERAMIC CHIP	4.7uF	10%	6.3V
C3349	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3350	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3351	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3601	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C3603	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3604	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3608	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3610	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C3611	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3612	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3613	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3614	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3615	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3616	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3617	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3618	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3619	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3620	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3621	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3622	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3626	1-107-826-91	CERAMIC CHIP	0.1uF	10%	16V
C3628	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3629	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3630	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3631	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3632	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3633	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3634	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3636	1-164-858-11	CERAMIC CHIP	22PF	5%	16V
C3701	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3704	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C3705	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C3706	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3707	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3708	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3709	1-164-677-11	CERAMIC CHIP	0.033uF	10%	16V
C3710	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3711	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3712	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3713	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3714	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3715	1-110-501-11	CERAMIC CHIP	0.33uF	10%	16V
C3716	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3717	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C3718	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3719	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3723	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3724	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C3728	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3729	1-125-838-91	CERAMIC CHIP	2.2uF	10%	6.3V
C3730	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C3731	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description			Remark
C3732	1-126-246-11	ELECT	220uF	20%	4V
C3733	1-126-246-11	ELECT	220uF	20%	4V
C3734	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C3735	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C4401	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4402	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4403	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4404	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4405	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4406	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4407	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4408	1-104-912-11	TANTALUM CHIP	3.3uF	10%	6.3V
C4409	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4410	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4411	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4412	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4413	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4414	1-164-933-11	CERAMIC CHIP	220PF	10%	16V
C4415	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C4416	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4417	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C4418	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C4419	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C4420	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4421	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C4424	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4425	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4426	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4427	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4428	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4429	1-119-923-81	CERAMIC CHIP	0.047uF	10%	10V
C4430	1-164-505-11	CERAMIC CHIP	2.2uF		16V
C4431	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4432	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4433	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C4434	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C4435	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C4436	1-164-935-11	CERAMIC CHIP	470PF	10%	16V
C4501	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C4504	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4505	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4506	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4507	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4508	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4509	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4510	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4801	1-115-156-11	CERAMIC CHIP	1uF		10V (TRV120/TRV120E/TRV120P/TRV125E)
C4802	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4803	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4804	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4805	1-104-851-11	TANTALUM CHIP	10uF	20%	10V
C4806	1-119-749-11	TANTALUM CHIP	33uF	20%	4V
C4807	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4808	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4809	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4810	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4811	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4812	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4813	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description			Remark
C4814	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4816	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4817	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4819	1-107-819-11	CERAMIC CHIP	0.022uF	10%	16V
C4820	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C4821	1-164-858-11	CERAMIC CHIP	22PF	5%	16V
C4822	1-164-854-11	CERAMIC CHIP	15PF	5%	16V
C4823	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4824	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4825	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4826	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4902	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C4903	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	16V
C4904	1-164-850-11	CERAMIC CHIP	10PF	0.50PF	16V
C4905	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4906	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4907	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4908	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4909	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C4910	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C4911	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5701	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C5702	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C5703	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5704	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C5705	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C5706	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C5709	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5710	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5711	1-110-569-11	TANTALUM CHIP	47uF	20%	6.3V
C5712	1-110-569-11	TANTALUM CHIP	47uF	20%	6.3V
C5713	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C5714	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C5715	1-135-180-21	TANTALUM CHIP	3.3uF	20%	6.3V
C5716	1-135-259-11	TANTALUM CHIP	10uF	20%	6.3V
C5717	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5718	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5719	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5720	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5721	1-164-939-11	CERAMIC CHIP	0.0022uF	10%	16V
C5722	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5723	1-104-847-11	TANTALUM CHIP	22uF	20%	4V
C5724	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5725	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5728	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5730	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5731	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5732	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5733	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5734	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5735	1-125-777-11	CERAMIC CHIP	0.1uF	10%	10V
C5736	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5737	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5738	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5739	1-125-837-91	CERAMIC CHIP	1uF	10%	6.3V
C5740	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5741	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5742	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C5743	1-164-937-11	CERAMIC CHIP	0.001uF	10%	16V
C5744	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V

Ref. No.	Part No.	Description			Remark
C5745	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5746	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C5747	1-117-863-11	CERAMIC CHIP	0.47uF	10%	6.3V
C5748	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5749	1-164-870-11	CERAMIC CHIP	68PF	5%	16V
C5750	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C5751	1-135-201-11	TANTALUM CHIP	10uF	20%	4V
C5752	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5753	1-164-943-11	CERAMIC CHIP	0.01uF	10%	16V
C5754	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5755	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C5756	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5757	1-164-942-11	CERAMIC CHIP	0.0068uF	10%	16V
C5758	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V
C5759	1-115-467-11	CERAMIC CHIP	0.22uF	10%	10V

< CONNECTOR >

Ref. No.	Part No.	Description
CN1101	1-766-340-21	CONNECTOR, FFC/FPC 10P
CN1103	1-766-358-21	CONNECTOR, FFC/FPC 28P
CN1105	1-785-760-11	CONNECTOR, FFC/FPC (ZIF) 45P
CN1107	1-766-342-21	CONNECTOR, FFC/FPC 12P
CN1108	1-766-350-21	CONNECTOR, FFC/FPC 20P
CN1109	1-794-059-21	PIN, CONNECTOR (PC BOARD) 8P (TRV120/TRV120E/TRV120P/TRV125E)
CN1111	1-770-107-21	CONNECTOR, FFC/FPC (ZIF) 32P
* CN1113	1-766-971-21	CONNECTOR, BOARD TO BOARD 42P
CN1501	1-779-332-11	CONNECTOR, FFC/FPC 16P
CN1551	1-750-360-21	CONNECTOR, FFC/FPC (ZIF) 24P
CN3101	1-766-346-21	CONNECTOR, FFC/FPC 16P
CN4401	1-766-644-21	CONNECTOR, FFC/FPC 8P
CN4402	1-766-340-21	CONNECTOR, FFC/FPC 10P
CN4403	1-766-342-21	CONNECTOR, FFC/FPC 12P
CN4404	1-766-345-21	CONNECTOR, FFC/FPC 15P

< DIODE >

Ref. No.	Part No.	Description	
D1101	8-719-069-59	DIODE	UDZS-TE17-8.2B
D1102	8-719-062-16	DIODE	01ZA8.2 (TPL3)
D1103	8-719-062-16	DIODE	01ZA8.2 (TPL3)
D1104	8-719-062-16	DIODE	01ZA8.2 (TPL3)
D1301	8-719-027-76	DIODE	1SS357-TPH3
D1302	8-719-027-77	DIODE	MA796-TX
D1305	8-719-027-76	DIODE	1SS357-TPH3
D1306	8-719-027-76	DIODE	1SS357-TPH3
D1501	8-713-103-84	DIODE	1T379-01-T8A
D1551	8-719-073-01	DIODE	MA111- (K8) .S0
D2201	8-719-055-86	DIODE	KV1470TL1-3
D2202	8-719-055-86	DIODE	KV1470TL1-3
D3301	8-719-992-02	DIODE	RB705D-T146
D3302	8-719-055-86	DIODE	KV1470TL1-3
D3303	8-719-992-02	DIODE	RB705D-T146
D3304	8-719-055-86	DIODE	KV1470TL1-3
D4401	8-719-075-12	DIODE	MA3XD21001S0
D4801	8-719-073-01	DIODE	MA111- (K8) .S0
D4802	8-719-073-01	DIODE	MA111- (K8) .S0
D4803	8-719-073-01	DIODE	MA111- (K8) .S0
D4804	8-719-073-01	DIODE	MA111- (K8) .S0

< FERRITE BEAD >

Ref. No.	Part No.	Description	
FB1501	1-414-760-21	FERRITE	0uH
FB1502	1-500-284-21	INDUCTOR CHIP	0uH

Ref. No.	Part No.	Description	Remark
FB1503	1-500-284-21	INDUCTOR CHIP 0uH	
FB1504	1-414-760-21	FERRITE 0uH	
FB1505	1-500-284-21	INDUCTOR CHIP 0uH	
FB2202	1-414-760-21	FERRITE 0uH	
FB2203	1-414-760-21	FERRITE 0uH	
FB2204	1-414-760-21	FERRITE 0uH	
FB2205	1-414-760-21	FERRITE 0uH	
FB2291	1-414-760-21	FERRITE 0uH	
FB3303	1-414-760-21	FERRITE 0uH	
FB3304	1-414-760-21	FERRITE 0uH	
FB3307	1-414-760-21	FERRITE 0uH	
FB3601	1-414-760-21	FERRITE 0uH	
FB3701	1-414-760-21	FERRITE 0uH	
FB4501	1-414-760-21	FERRITE 0uH	
FB4801	1-414-760-21	FERRITE 0uH	
FB4901	1-414-760-21	FERRITE 0uH	

< IC >

Ref. No.	Part No.	Description	Remark
IC1301	8-752-090-20	IC CXA3057R-T6	
IC1302	8-759-652-10	IC TK11119SCL	
IC1303	8-759-650-28	IC RN5RZ59BA-TL	
IC1501	8-752-386-72	IC CXD2444R-T4	
IC1502	8-759-638-69	IC VSP2200Y-2K	
IC1552	8-759-444-87	IC NJM324V (TE2)	
IC1553	8-759-637-96	IC uPD16877MA-6A5-E2	
IC2201	8-759-599-07	IC HG75C012FFL	
IC2202	8-759-058-60	IC TC7SU04FU (TE85R)	
IC2291	8-759-169-02	IC MB88344BPFV-G-BND-ER	(TRV120/TRV120P)
IC2291	8-759-536-93	IC M62371GP-600D	(TRV120E/TRV125E/TR8000E/TR8100E)
IC3101	8-752-086-52	IC CXA2071R-T4	
IC3102	8-759-195-81	IC TC7S86FU (TE85R)	
IC3103	8-752-086-53	IC CXA2072R-T4	
IC3201	8-752-093-69	IC CXA3265R-T4	
IC3202	8-759-075-70	IC TA75S393F-TE85R	
IC3301	8-759-650-74	IC CAIN	
IC3302	8-759-646-93	IC MB90099PFV-G-102-BND-ER	
IC3303	8-759-566-52	IC SN104266PN-TEB	
IC3304	8-759-643-08	IC TK11215BMCL	
IC3603	8-759-653-60	IC MB87L1241PFV-G-BND-ER	
IC3701	8-759-599-37	IC AN2225FHQ-EB	
IC4401	8-759-640-85	IC CXA8096R-TBM	
IC4501	8-759-669-94	IC MB91192PFF-G-109-BND-ER	
IC4502	8-759-593-47	IC AK6417AM-E2	(TRV120/TRV120P)
IC4502	8-759-640-87	IC BR9016RFV-E2	(TRV120E/TRV125E/TR8000E/TR8100E)
IC4801	8-759-424-79	IC S-8423YFS-T2	
IC4802	8-759-642-45	IC TL1596CPWR	
IC4803	8-759-641-50	IC S579612PZ-TEB	
IC4901	8-759-445-94	IC AK6480AM-E2	
IC4902	8-759-665-32	IC MB91192PFF-G-108-BND-ER	
IC5701	8-752-093-72	IC CXA3284R-T6	
IC5702	8-759-647-71	IC AK4550VT-E2	

< COIL >

Ref. No.	Part No.	Description	Remark
L1301	1-416-670-11	INDUCTOR 33uH	
L1302	1-416-669-11	INDUCTOR 22uH	
L1303	1-416-669-11	INDUCTOR 22uH	
L1304	1-416-669-11	INDUCTOR 22uH	
L1305	1-416-669-11	INDUCTOR 22uH	
L1306	1-412-056-11	INDUCTOR 4.7uH	
L1307	1-412-056-11	INDUCTOR 4.7uH	
L1308	1-469-524-91	INDUCTOR 4.7uH	
L1309	1-469-524-91	INDUCTOR 4.7uH	
L1310	1-412-056-11	INDUCTOR 4.7uH	
L1311	1-469-524-91	INDUCTOR 4.7uH	
L1312	1-469-524-91	INDUCTOR 4.7uH	
L1313	1-469-524-91	INDUCTOR 4.7uH	
L1314	1-469-524-91	INDUCTOR 4.7uH	
L1315	1-469-524-91	INDUCTOR 4.7uH	(TRV120/TRV120E/TRV120P/TRV125E)
L1316	1-414-400-11	INDUCTOR 22uH	
L1317	1-416-669-11	INDUCTOR 22uH	(TRV120/TRV120E/TRV120P/TRV125E)
L1318	1-469-524-91	INDUCTOR 4.7uH	(TRV120/TRV120E/TRV120P/TRV125E)
L1320	1-469-526-91	INDUCTOR 22uH	(TRV120/TRV120E/TRV120P/TRV125E)
L1321	1-469-524-91	INDUCTOR 4.7uH	
L1501	1-469-525-91	INDUCTOR 10uH	
L1551	1-469-525-91	INDUCTOR 10uH	
L1552	1-469-525-91	INDUCTOR 10uH	
L1553	1-469-525-91	INDUCTOR 10uH	
L2201	1-469-525-91	INDUCTOR 10uH	
L2202	1-469-525-91	INDUCTOR 10uH	
L2203	1-469-525-91	INDUCTOR 10uH	
L2204	1-469-525-91	INDUCTOR 10uH	
L2207	1-412-945-11	INDUCTOR 3.3uH	
L2208	1-469-525-91	INDUCTOR 10uH	
L2209	1-469-525-91	INDUCTOR 10uH	
L2291	1-469-525-91	INDUCTOR 10uH	
L3102	1-469-525-91	INDUCTOR 10uH	
L3103	1-469-525-91	INDUCTOR 10uH	
L3104	1-469-525-91	INDUCTOR 10uH	
L3105	1-414-406-11	INDUCTOR 220uH	
L3106	1-412-952-11	INDUCTOR 12uH	
L3201	1-469-526-91	INDUCTOR 22uH	
L3303	1-412-936-11	INDUCTOR 0.56uH	
L3304	1-414-246-11	INDUCTOR 1.8uH	
L3305	1-469-525-91	INDUCTOR 10uH	
L3306	1-469-525-91	INDUCTOR 10uH	
L3307	1-469-525-91	INDUCTOR 10uH	
L3601	1-469-525-91	INDUCTOR 10uH	
L3602	1-469-525-91	INDUCTOR 10uH	
L3701	1-469-525-91	INDUCTOR 10uH	
L3705	1-469-525-91	INDUCTOR 10uH	

< TRANSISTOR >

Ref. No.	Part No.	Description	Remark
Q1101	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q1102	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q1103	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q1104	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q1301	8-729-043-60	TRANSISTOR CPH6102-TL	
Q1302	8-729-046-98	TRANSISTOR CPH6702-TL	
Q1303	8-729-046-98	TRANSISTOR CPH6702-TL	
Q1304	8-729-046-98	TRANSISTOR CPH6702-TL	
Q1305	8-729-046-98	TRANSISTOR CPH6702-TL	
Q1306	8-729-046-98	TRANSISTOR CPH6702-TL	
Q1307	8-729-044-58	TRANSISTOR SI2304DS-T1	
Q1308	8-729-044-58	TRANSISTOR SI2304DS-T1	

Ref. No.	Part No.	Description	Remark
Q1309	8-729-046-98	TRANSISTOR CPH6702-TL	(TRV120/TRV120E/TRV120P/TRV125E)
Q1310	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q1311	8-729-017-61	TRANSISTOR 2SB1581-T1	
Q1312	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q1313	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q1314	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q1315	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q1316	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q1317	8-729-037-74	TRANSISTOR UN9213J- (K8).SO	(TRV120/TRV120E/TRV120P/TRV125E)
Q1318	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q1319	8-729-041-23	TRANSISTOR MGSF1P02LT1	(TRV120/TRV120E/TRV120P/TRV125E)
Q1320	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q1321	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q1322	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	(TRV120/TRV120E/TRV120P/TRV125E)
Q1323	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q1324	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	(TRV120/TRV120E/TRV120P/TRV125E)
Q1325	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q1326	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	(TRV120/TRV120E/TRV120P/TRV125E)
Q1551	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q1552	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q1553	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q1554	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q2204	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q2206	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3102	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3103	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q3104	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3105	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q3106	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q3107	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3108	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3109	8-729-042-58	TRANSISTOR RN2102F (TPL3)	
Q3110	8-729-042-58	TRANSISTOR RN2102F (TPL3)	
Q3111	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3112	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3113	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3114	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3115	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3116	8-729-047-19	TRANSISTOR 2SA1965-S-TL	
Q3201	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q3302	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	(TRV120/TRV120E/TRV120P/TRV125E)
Q3304	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3	(TRV120/TRV120E/TRV120P/TRV125E)
Q3305	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3306	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	(TRV120/TRV120E/TRV120P/TRV125E)
Q3307	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3308	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3602	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3603	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q3604	8-729-807-86	TRANSISTOR 2SB1295-UL5/6-TB	
Q3605	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q3606	8-729-037-53	TRANSISTOR 2SA1832F-Y/GR (TPL3)	
Q3701	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q4401	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q4402	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q4801	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	(TRV120/TRV120E/TRV120P/TRV125E)
Q4802	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q4803	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q4804	8-729-041-43	TRANSISTOR HN1L02FU (TE85R)	
Q4805	8-729-042-29	TRANSISTOR RN1104F (TPL3)	
Q4806	8-729-042-58	TRANSISTOR RN2102F (TPL3)	
Q4901	8-729-045-71	TRANSISTOR RN1102F (TPL3)	
Q5701	8-729-045-78	TRANSISTOR RN1110F (TPL3)	
Q5703	8-729-045-78	TRANSISTOR RN1110F (TPL3)	
Q5704	8-729-045-78	TRANSISTOR RN1110F (TPL3)	
Q5706	8-729-045-78	TRANSISTOR RN1110F (TPL3)	
Q5708	8-729-037-63	TRANSISTOR RN2111F (TPL3)	
Q5714	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
Q5715	8-729-037-52	TRANSISTOR 2SC4738F-Y/GR (TPL3)	
		< RESISTOR >	
R1101	1-218-990-11	SHORT 0	
R1105	1-218-990-11	SHORT 0	
R1106	1-218-990-11	SHORT 0	
R1107	1-218-990-11	SHORT 0	
R1108	1-218-990-11	SHORT 0	
R1109	1-218-990-11	SHORT 0	
R1110	1-218-990-11	SHORT 0	
R1111	1-218-990-11	SHORT 0	
R1112	1-218-990-11	SHORT 0	
R1113	1-218-990-11	SHORT 0	
R1114	1-218-990-11	SHORT 0	
R1115	1-218-990-11	SHORT 0	
R1116	1-218-990-11	SHORT 0	
R1117	1-218-990-11	SHORT 0	
R1118	1-218-990-11	SHORT 0	
R1119	1-218-990-11	SHORT 0	
R1120	1-218-990-11	SHORT 0	
R1121	1-218-990-11	SHORT 0	
R1122	1-218-990-11	SHORT 0	
R1123	1-218-990-11	SHORT 0	
R1124	1-218-990-11	SHORT 0	(TRV120/TRV120E/TRV120P/TRV125E)
R1125	1-218-990-11	SHORT 0	(TR8000E/TR8100E)
R1127	1-218-974-11	RES-CHIP 56K 5% 1/16W	(TRV120/TRV120P)
R1127	1-218-965-11	RES-CHIP 10K 5% 1/16W	(TRV120E/TRV125E/TR8000E/TR8100E)
R1128	1-218-975-11	RES-CHIP 68K 5% 1/16W	(TRV120/TRV120P)
R1128	1-218-977-11	RES-CHIP 100K 5% 1/16W	(TRV120E/TRV125E/TR8000E/TR8100E)
R1129	1-218-953-11	RES-CHIP 1K 5% 1/16W	
R1130	1-218-990-11	SHORT 0	
R1131	1-218-973-11	RES-CHIP 47K 5% 1/16W	(TRV120/TRV120P)
R1131	1-218-974-11	RES-CHIP 56K 5% 1/16W	(TRV120E/TRV125E)
R1131	1-218-969-11	RES-CHIP 22K 5% 1/16W	(TR8000E/TR8100E)
R1132	1-218-977-11	RES-CHIP 100K 5% 1/16W	(TRV120/TRV120P/TR8000E/TR8100E)
R1132	1-218-975-11	RES-CHIP 68K 5% 1/16W	(TRV120E/TRV125E)

Ref. No.	Part No.	Description			Remark
R1134	1-218-990-11	SHORT	0		
R1137	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1141	1-216-295-91	SHORT	0		
R1142	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1143	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1144	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R1145	1-218-990-11	SHORT	0		
R1146	1-218-951-11	RES-CHIP	680	5%	1/16W
R1147	1-218-973-11	RES-CHIP	47K	5%	1/16W
R1301	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1302	1-218-971-11	RES-CHIP	33K	5%	1/16W
R1303	1-218-974-11	METAL CHIP	56K	0.5%	1/16W
R1304	1-218-971-11	RES-CHIP	33K	5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1305	1-218-990-11	SHORT	0		
R1306	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1307	1-218-990-11	SHORT	0		
R1308	1-218-990-11	SHORT	0		
R1309	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1310	1-218-990-11	SHORT	0		
R1311	1-218-971-11	RES-CHIP	33K	5%	1/16W
R1312	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R1313	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1314	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1315	1-218-990-11	SHORT	0		
R1316	1-216-864-11	METAL CHIP	0	5%	1/16W
R1317	1-218-973-11	RES-CHIP	47K	5%	1/16W
R1318	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R1319	1-218-973-11	RES-CHIP	47K	5%	1/16W
R1320	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1321	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R1322	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R1323	1-218-977-11	RES-CHIP	100K	5%	1/16W
R1324	1-216-295-91	SHORT	0		
		(TR8000E/TR8100E)			
R1325	1-216-295-91	SHORT	0		
		(TR8000E/TR8100E)			
R1326	1-218-965-11	RES-CHIP	10K	5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1327	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1328	1-218-989-11	RES-CHIP	1M	5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1329	1-218-989-11	RES-CHIP	1M	5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1330	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R1331	1-218-968-11	RES-CHIP	18K	5%	1/16W
R1332	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
R1333	1-218-973-11	RES-CHIP	47K	5%	1/16W
R1334	1-218-977-11	RES-CHIP	100K	5%	1/16W
R1335	1-218-977-11	RES-CHIP	100K	5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1336	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1337	1-218-977-11	RES-CHIP	100K	5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1338	1-208-935-11	METAL CHIP	100K	0.5%	1/16W
R1339	1-208-927-11	METAL CHIP	47K	0.5%	1/16W
R1340	1-218-967-11	RES-CHIP	15K	5%	1/16W
R1341	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1342	1-208-943-11	METAL CHIP	220K	0.5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			

Ref. No.	Part No.	Description			Remark
R1343	1-208-931-11	METAL CHIP	68K	0.5%	1/16W
		(TRV120/TRV120E/TRV120P/TRV125E)			
R1345	1-218-990-11	SHORT	0		
R1347	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R1348	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R1501	1-216-864-11	METAL CHIP	0	5%	1/16W
R1502	1-216-864-11	METAL CHIP	0	5%	1/16W
R1503	1-218-977-11	RES-CHIP	100K	5%	1/16W
R1504	1-218-941-11	RES-CHIP	100	5%	1/16W
R1505	1-218-941-11	RES-CHIP	100	5%	1/16W
R1506	1-218-941-11	RES-CHIP	100	5%	1/16W
R1511	1-218-990-11	SHORT	0		
R1512	1-218-985-11	RES-CHIP	470K	5%	1/16W
R1514	1-218-990-11	SHORT	0		
R1520	1-218-990-11	SHORT	0		
R1551	1-218-973-11	RES-CHIP	47K	5%	1/16W
R1552	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1553	1-216-295-91	SHORT	0		
R1555	1-218-975-11	RES-CHIP	68K	5%	1/16W
R1556	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1557	1-218-975-11	RES-CHIP	68K	5%	1/16W
R1558	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R1559	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R1560	1-218-929-11	RES-CHIP	10	5%	1/16W
R1561	1-218-989-11	RES-CHIP	1M	5%	1/16W
R1562	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R1563	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1564	1-218-981-11	RES-CHIP	220K	5%	1/16W
R1565	1-218-985-11	RES-CHIP	470K	5%	1/16W
R1566	1-218-985-11	RES-CHIP	470K	5%	1/16W
R1567	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R1568	1-218-967-11	RES-CHIP	15K	5%	1/16W
R1569	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1570	1-218-985-11	RES-CHIP	470K	5%	1/16W
R1571	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1572	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1573	1-218-947-11	RES-CHIP	330	5%	1/16W
R1574	1-218-969-11	RES-CHIP	22K	5%	1/16W
R1575	1-218-953-11	RES-CHIP	1K	5%	1/16W
R1576	1-218-965-11	RES-CHIP	10K	5%	1/16W
R1577	1-218-973-11	RES-CHIP	47K	5%	1/16W
R2205	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2206	1-218-977-11	RES-CHIP	100K	5%	1/16W
R2208	1-218-990-11	SHORT	0		
R2209	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2210	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R2211	1-218-990-11	SHORT	0		
R2213	1-218-962-11	RES-CHIP	5.6K	5%	1/16W
R2215	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2216	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R2218	1-218-949-11	RES-CHIP	470	5%	1/16W
R2219	1-218-941-11	RES-CHIP	100	5%	1/16W
R2220	1-218-972-11	RES-CHIP	39K	5%	1/16W
R2221	1-218-952-11	RES-CHIP	820	5%	1/16W
R2222	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R2223	1-218-964-11	RES-CHIP	8.2K	5%	1/16W
R2224	1-218-966-11	RES-CHIP	12K	5%	1/16W
R2225	1-218-949-11	RES-CHIP	470	5%	1/16W
R2230	1-218-990-11	SHORT	0		
R2240	1-218-989-11	RES-CHIP	1M	5%	1/16W

Ref. No.	Part No.	Description			Remark
R2242	1-218-967-11	RES-CHIP	15K	5%	1/16W
R2243	1-218-967-11	RES-CHIP	15K	5%	1/16W
R2244	1-218-966-11	RES-CHIP	12K	5%	1/16W
R2245	1-218-949-11	RES-CHIP	470	5%	1/16W
R2247	1-218-953-11	RES-CHIP	1K	5%	1/16W
R2248	1-218-965-11	RES-CHIP	10K	5%	1/16W
R2254	1-218-990-11	SHORT	0		
R2255	1-218-990-11	SHORT	0		
R2256	1-216-864-11	METAL CHIP	0	5%	1/16W (Note)
R3103	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3104	1-218-963-11	RES-CHIP	6.8K	5%	1/16W
R3105	1-218-990-11	SHORT	0		
R3106	1-218-990-11	SHORT	0		
R3107	1-218-979-11	RES-CHIP	150K	5%	1/16W
R3108	1-218-989-11	RES-CHIP	1M	5%	1/16W
R3109	1-218-966-11	RES-CHIP	12K	5%	1/16W
R3110	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3111	1-218-949-11	RES-CHIP	470	5%	1/16W
R3112	1-218-939-11	RES-CHIP	68	5%	1/16W
R3113	1-218-966-11	RES-CHIP	12K	5%	1/16W
R3114	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3115	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3116	1-218-990-11	SHORT	0		
R3117	1-218-969-11	RES-CHIP	22K	5%	1/16W
R3118	1-220-196-11	METAL CHIP	13K	0.5%	1/16W
R3119	1-218-970-11	METAL CHIP	27K	0.5%	1/16W
R3120	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R3121	1-208-709-11	METAL CHIP	12K	0.5%	1/16W
R3122	1-208-931-11	METAL CHIP	68K	0.5%	1/16W
R3123	1-218-969-11	RES-CHIP	22K	5%	1/16W
R3124	1-218-969-11	RES-CHIP	22K	5%	1/16W
R3125	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R3126	1-218-969-11	RES-CHIP	22K	5%	1/16W
R3127	1-218-971-11	RES-CHIP	33K	5%	1/16W
R3128	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3129	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R3130	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R3131	1-218-945-11	METAL CHIP	220	0.5%	1/16W
R3132	1-218-946-11	RES-CHIP	270	5%	1/16W
R3133	1-218-945-11	RES-CHIP	220	5%	1/16W
R3136	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R3137	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3138	1-218-941-11	RES-CHIP	100	5%	1/16W
R3139	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R3140	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R3141	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R3142	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R3143	1-218-938-11	RES-CHIP	56	5%	1/16W
R3144	1-218-950-11	RES-CHIP	560	5%	1/16W
R3146	1-216-295-91	SHORT	0		
R3205	1-218-985-11	RES-CHIP	470K	5%	1/16W
R3206	1-218-985-11	RES-CHIP	470K	5%	1/16W
R3210	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3211	1-218-990-11	SHORT	0		
R3212	1-218-986-11	RES-CHIP	560K	5%	1/16W
R3213	1-218-985-11	RES-CHIP	470K	5%	1/16W
R3214	1-218-981-11	RES-CHIP	220K	5%	1/16W
R3215	1-208-939-11	METAL CHIP	150K	0.5%	1/16W
R3305	1-218-990-11	SHORT	0		
R3308	1-218-990-11	SHORT	0		
R3309	1-218-990-11	SHORT	0		
R3310	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3311	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3312	1-218-946-11	RES-CHIP	270	5%	1/16W
R3313	1-218-990-11	SHORT	0		
R3314	1-218-990-11	SHORT	0		
R3315	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R3316	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R3317	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3318	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3319	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3320	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R3321	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3322	1-218-941-11	RES-CHIP	100	5%	1/16W
R3323	1-218-947-11	RES-CHIP	330	5%	1/16W
R3324	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3325	1-218-937-11	RES-CHIP	47	5%	1/16W
R3326	1-218-990-11	SHORT	0		
R3328	1-208-886-81	METAL CHIP	910	0.5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R3331	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R3333	1-218-990-11	SHORT	0		
R3334	1-208-886-81	METAL CHIP	910	0.5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R3336	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R3337	1-218-990-11	SHORT	0		
R3338	1-218-955-11	RES-CHIP	1.5K	5%	1/16W
R3340	1-208-886-81	METAL CHIP	910	0.5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R3341	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3343	1-218-961-11	RES-CHIP	4.7K	5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R3346	1-218-990-11	SHORT	0		
R3349	1-218-990-11	SHORT	0		
R3350	1-218-990-11	SHORT	0		
R3351	1-218-954-11	RES-CHIP	1.2K	5%	1/16W
R3352	1-218-990-11	SHORT	0		
R3356	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R3358	1-218-945-11	RES-CHIP	220	5%	1/16W
R3360	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R3361	1-208-709-11	METAL CHIP	12K	0.5%	1/16W
R3362	1-218-990-11	SHORT	0		
R3364	1-208-709-11	METAL CHIP	12K	0.5%	1/16W
R3365	1-218-990-11	SHORT	0		
R3367	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R3368	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R3369	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R3370	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R3371	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R3372	1-218-938-11	METAL CHIP	56	0.5%	1/16W
R3375	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3376	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3377	1-218-941-11	RES-CHIP	100	5%	1/16W

Note: R2256 is mounted on the board with suffix number 12 (22, 32) and 13 (23, 33)

Ref. No.	Part No.	Description			Remark
R3378	1-218-941-11	RES-CHIP	100	5%	1/16W
R3379	1-218-941-11	RES-CHIP	100	5%	1/16W
R3380	1-218-941-11	RES-CHIP	100	5%	1/16W
R3381	1-218-941-11	RES-CHIP	100	5%	1/16W
R3382	1-218-990-11	SHORT	0		
R3383	1-218-990-11	SHORT	0		
R3385	1-216-864-11	METAL CHIP	0	5%	1/16W
R3386	1-216-864-11	METAL CHIP	0	5%	1/16W
R3604	1-218-990-11	SHORT	0		
R3607	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3609	1-218-990-11	SHORT	0		
R3611	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3612	1-218-973-11	RES-CHIP	47K	5%	1/16W
R3617	1-218-951-11	RES-CHIP	680	5%	1/16W
R3618	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3622	1-218-949-11	RES-CHIP	470	5%	1/16W
R3636	1-218-990-11	SHORT	0		
R3639	1-218-990-11	SHORT	0		
R3643	1-218-990-11	SHORT	0		
R3652	1-218-990-11	SHORT	0		
R3656	1-218-990-11	SHORT	0		
R3657	1-218-977-11	RES-CHIP	100K	5%	1/16W
R3658	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3659	1-218-960-11	RES-CHIP	3.9K	5%	1/16W
R3660	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R3701	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3702	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R3704	1-218-941-11	RES-CHIP	100	5%	1/16W
R3705	1-218-981-11	RES-CHIP	220K	5%	1/16W
R3712	1-218-936-11	RES-CHIP	39	5%	1/16W
R3713	1-218-935-11	RES-CHIP	33	5%	1/16W
R3714	1-218-936-11	RES-CHIP	39	5%	1/16W
R3715	1-218-935-11	RES-CHIP	33	5%	1/16W
R3716	1-218-936-11	RES-CHIP	39	5%	1/16W
R3717	1-218-935-11	RES-CHIP	33	5%	1/16W
R3721	1-208-715-11	METAL CHIP	22K	0.5%	1/16W
R3722	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3724	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3726	1-218-965-11	RES-CHIP	10K	5%	1/16W
R3727	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3728	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3729	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3730	1-218-953-11	RES-CHIP	1K	5%	1/16W
R3734	1-216-295-91	SHORT	0		
R4401	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4402	1-218-983-11	RES-CHIP	330K	5%	1/16W
R4403	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4404	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4405	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4406	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4407	1-218-949-11	RES-CHIP	470	5%	1/16W
R4408	1-217-671-11	METAL CHIP	1	5%	1/10W
R4409	1-217-671-11	METAL CHIP	1	5%	1/10W
R4410	1-217-671-11	METAL CHIP	1	5%	1/10W
R4411	1-216-023-00	METAL CHIP	82	5%	1/10W
R4413	1-218-990-11	SHORT	0		
R4414	1-218-946-11	RES-CHIP	270	5%	1/16W
R4416	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4417	1-208-707-11	METAL CHIP	10K	0.5%	1/16W
R4423	1-218-990-11	SHORT	0		

Ref. No.	Part No.	Description			Remark
R4424	1-218-967-11	RES-CHIP	15K	5%	1/16W
					(TRV120/TRV120P)
R4424	1-218-973-11	RES-CHIP	47K	5%	1/16W
					(TRV120E/TRV125E/TR8000E/TR8100E)
R4425	1-218-959-11	RES-CHIP	3.3K	5%	1/16W
R4426	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4427	1-218-990-11	SHORT	0		
					(TRV120/TRV120P)
R4427	1-218-965-11	RES-CHIP	10K	5%	1/16W
					(TRV120E/TRV125E/TR8000E/TR8100E)
R4428	1-217-671-11	METAL CHIP	1	5%	1/10W
R4429	1-217-671-11	METAL CHIP	1	5%	1/10W
R4430	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4431	1-218-967-11	RES-CHIP	15K	5%	1/16W
					(TRV120/TRV120P)
R4431	1-218-973-11	RES-CHIP	47K	5%	1/16W
					(TRV120E/TRV125E/TR8000E/TR8100E)
R4432	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4434	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4435	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4436	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4437	1-218-990-11	SHORT	0		
R4438	1-218-990-11	SHORT	0		
R4442	1-218-990-11	SHORT	0		
R4443	1-218-990-11	SHORT	0		
R4444	1-218-990-11	SHORT	0		
R4445	1-218-990-11	SHORT	0		
R4446	1-218-990-11	SHORT	0		
R4447	1-218-971-11	RES-CHIP	33K	5%	1/16W
R4448	1-218-971-11	RES-CHIP	33K	5%	1/16W
R4502	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4503	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4504	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4505	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4507	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4508	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4511	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4512	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4514	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4515	1-218-990-11	SHORT	0		
R4516	1-218-990-11	SHORT	0		
R4517	1-218-990-11	SHORT	0		
R4518	1-218-990-11	SHORT	0		
R4520	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4521	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4522	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4523	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4524	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4525	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4526	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4527	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4528	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4529	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4530	1-218-949-11	RES-CHIP	470	5%	1/16W
R4531	1-218-990-11	SHORT	0		
R4532	1-218-990-11	SHORT	0		
R4533	1-218-990-11	SHORT	0		
R4534	1-218-990-11	SHORT	0		
R4801	1-218-973-11	RES-CHIP	47K	5%	1/16W
					(TRV120/TRV120E/TRV120P/TRV125E)
R4802	1-218-961-11	RES-CHIP	4.7K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R4803	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4805	1-218-959-11	RES-CHIP	3.3K	5%	1/16W (TR8000E/TR8100E)
R4806	1-218-953-11	RES-CHIP	1K	5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R4807	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R4808	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4809	1-218-953-11	RES-CHIP	1K	5%	1/16W (TRV120/TRV120E/TRV120P/TRV125E)
R4810	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4811	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4813	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4814	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4815	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4816	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4817	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4818	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4819	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4820	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4821	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4822	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4823	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4824	1-218-958-11	RES-CHIP	2.7K	5%	1/16W
R4825	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4826	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4827	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4828	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4829	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4830	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4832	1-218-989-11	RES-CHIP	1M	5%	1/16W
R4833	1-218-985-11	METAL CHIP	470K	0.5%	1/16W
R4834	1-218-985-11	METAL CHIP	470K	0.5%	1/16W
R4835	1-218-989-11	METAL CHIP	1M	0.5%	1/16W
R4836	1-218-989-11	METAL CHIP	1M	0.5%	1/16W
R4837	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4838	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4839	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4840	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4841	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4842	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4843	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4844	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4846	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4848	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4849	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4851	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4852	1-218-989-11	RES-CHIP	1M	5%	1/16W
R4853	1-218-990-11	SHORT	0		
R4855	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4856	1-218-990-11	SHORT	0		
R4861	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4862	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4863	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4864	1-218-986-11	RES-CHIP	560K	5%	1/16W
R4866	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4867	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4868	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4869	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4871	1-218-989-11	RES-CHIP	1M	5%	1/16W
R4872	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4873	1-218-977-11	RES-CHIP	100K	5%	1/16W

Ref. No.	Part No.	Description			Remark
R4874	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4875	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4876	1-219-570-11	RES-CHIP	10M	5%	1/16W
R4877	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4878	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4879	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4880	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4881	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4882	1-218-949-11	RES-CHIP	470	5%	1/16W
R4883	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4884	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4885	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4886	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4887	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4888	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4892	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4894	1-218-990-11	SHORT	0		
R4895	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4897	1-218-990-11	SHORT	0		
R4901	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4902	1-218-986-11	RES-CHIP	560K	5%	1/16W
R4903	1-218-990-11	SHORT	0		
R4904	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4906	1-218-990-11	SHORT	0		
R4908	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4910	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4911	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4912	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4913	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R4914	1-218-990-11	SHORT	0		
R4915	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4916	1-218-961-11	RES-CHIP	4.7K	5%	1/16W
R4917	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4918	1-218-957-11	RES-CHIP	2.2K	5%	1/16W
R4919	1-218-990-11	SHORT	0		
R4920	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4921	1-218-965-11	RES-CHIP	10K	5%	1/16W
R4922	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4923	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4924	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4925	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4926	1-218-985-11	RES-CHIP	470K	5%	1/16W
R4927	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4928	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4929	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4930	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4931	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4932	1-218-973-11	RES-CHIP	47K	5%	1/16W
R4933	1-218-990-11	SHORT	0		
R4934	1-218-990-11	SHORT	0		
R4935	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4936	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4938	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4939	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4940	1-218-977-11	RES-CHIP	100K	5%	1/16W
R4941	1-218-990-11	SHORT	0		
R4942	1-218-990-11	SHORT	0		
R4943	1-218-953-11	RES-CHIP	1K	5%	1/16W
R4944	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5701	1-218-990-11	SHORT	0		

Ref. No.	Part No.	Description			Remark
R5702	1-218-990-11	SHORT	0		
R5707	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5708	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5709	1-218-973-11	RES-CHIP	47K	5%	1/16W
R5710	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5711	1-218-941-11	RES-CHIP	100	5%	1/16W
R5712	1-218-941-11	RES-CHIP	100	5%	1/16W
R5714	1-218-973-11	RES-CHIP	47K	5%	1/16W
R5715	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5717	1-218-953-11	RES-CHIP	1K	5%	1/16W
R5718	1-218-967-11	RES-CHIP	15K	5%	1/16W
R5719	1-218-976-11	RES-CHIP	82K	5%	1/16W
R5720	1-218-979-11	RES-CHIP	150K	5%	1/16W
R5721	1-218-973-11	RES-CHIP	47K	5%	1/16W
R5722	1-218-990-11	SHORT	0		
R5723	1-218-990-11	SHORT	0		
R5724	1-218-985-11	RES-CHIP	470K	5%	1/16W
R5725	1-218-985-11	RES-CHIP	470K	5%	1/16W
R5730	1-218-952-11	RES-CHIP	820	5%	1/16W
R5731	1-218-949-11	RES-CHIP	470	5%	1/16W
R5732	1-218-949-11	RES-CHIP	470	5%	1/16W
R5733	1-218-985-11	RES-CHIP	470K	5%	1/16W
R5735	1-218-990-11	SHORT	0		
R5736	1-218-990-11	SHORT	0		
R5737	1-218-990-11	SHORT	0		
R5738	1-218-990-11	SHORT	0		
R5739	1-218-990-11	SHORT	0		
R5740	1-218-990-11	SHORT	0		
R5741	1-218-990-11	SHORT	0		
R5742	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5743	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5744	1-218-973-11	RES-CHIP	47K	5%	1/16W
R5745	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5746	1-218-965-11	RES-CHIP	10K	5%	1/16W
R5747	1-218-973-11	RES-CHIP	47K	5%	1/16W
		< TRANSFORMER >			
T1301	1-435-252-11	TRANSFORMER, DC-DC CONVERTER			
		< VIBRATOR >			
X1501	1-767-586-21	VIBRATOR, CRYSTAL (27MHZ) (TRV120/ TRV120P)			
X1501	1-767-400-11	VIBRATOR, CRYSTAL (36MHz) (TRV120E/TRV125E/TR8000E/TR8100E)			
X3301	1-767-399-11	VIBRATOR, CRYSTAL (24.576MHZ)			
X4801	1-767-980-21	VIBRATOR, CERAMIC (20MHZ)			
X4802	1-760-458-21	VIBRATOR, CRYSTAL (32.768KHZ)			
X4901	1-760-655-41	VIBRATOR, CRYSTAL (20MHZ)			

Ref. No.	Part No.	Description			Remark
	A-7073-838-A	VF-129 BOARD, COMPLETE (TRV120/TRV120P)			
	A-7073-855-A	VF-129 BOARD, COMPLETE (TRV120E/TRV125E/TR8000E/TR8100E)			
		**********************			
		(Ref. No.: 20, 000 Series)			
		< CAPACITOR >			
C901	1-107-854-11	TANTALUM CHIP	68uF	20%	6.3V
C902	1-163-038-91	CERAMIC CHIP	0.1uF		25V
C903	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C904	1-162-965-11	CERAMIC CHIP	0.0015uF	10%	50V
C905	1-104-752-11	TANTALUM CHIP	33uF	20%	6.3V
C906	1-162-638-11	CERAMIC CHIP	1uF		16V
C907	1-104-563-11	FILM CHIP	0.1uF	5%	16V
C908	1-162-920-11	CERAMIC CHIP	27PF	5%	50V
C909	1-163-009-11	CERAMIC CHIP	0.001uF	10%	50V
⚠C910	1-162-625-11	CERAMIC CHIP	0.0047uF	5%	50V
⚠C911	1-164-715-11	CERAMIC CHIP	0.0068uF	5%	50V
C912	1-107-854-11	TANTALUM CHIP	68uF	20%	6.3V
C913	1-135-145-11	TANTALUM CHIP	0.47uF	10%	35V
C914	1-113-984-11	TANTALUM CHIP	1.5uF	20%	35V
C915	1-163-037-11	CERAMIC CHIP	0.022uF	10%	25V
C916	1-164-611-11	CERAMIC CHIP	0.001uF	10%	500V
		< CONNECTOR >			
* CN901	1-785-379-01	HOUSING, CONNECTOR			
* CN902	1-580-057-11	PIN, CONNECTOR (SMD) 4P			
		< DIODE >			
D901	8-719-951-21	DIODE PR1102W-TR (TALLY)			
D903	8-719-073-01	DIODE MA111- (K8) .S0			
		< IC >			
IC901	8-759-196-14	IC BA7149F-E2			
		< COIL >			
L901	1-412-031-11	INDUCTOR CHIP	47uH		
L902	1-410-387-11	INDUCTOR CHIP	33uH		
⚠L903	1-411-697-11	COIL, FERRITE (HLC)			
		< TRANSISTOR >			
Q901	8-729-230-63	TRANSISTOR 2SD1819A-QRS-TX			
Q902	8-729-106-68	TRANSISTOR 2SD1615-T1GLGK			
Q903	8-729-216-31	TRANSISTOR 2SA1163G-TE85L			
Q904	8-729-230-63	TRANSISTOR 2SD1819A-QRS-TX			
		< RESISTOR >			
R901	1-216-817-11	METAL CHIP	470	5%	1/16W
R902	1-216-817-11	METAL CHIP	470	5%	1/16W
R903	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R904	1-216-833-91	RES-CHIP	10K	5%	1/16W
R905	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R906	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R907	1-216-845-11	METAL CHIP	100K	5%	1/16W
R908	1-216-852-11	METAL CHIP	390K	5%	1/16W
R909	1-216-833-91	RES-CHIP	10K	5%	1/16W
R910	1-216-835-11	METAL CHIP	15K	5%	1/16W
R911	1-216-160-00	RES-CHIP	27	5%	1/8W
R912	1-216-857-11	METAL CHIP	1M	5%	1/16W
R915	1-218-879-11	METAL CHIP	22K	0.5%	1/16W (TRV120/TRV120P)
R916	1-218-881-11	METAL CHIP	27K	0.5%	1/16W (TRV120E/TRV125E/TR8000/TR8100)

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

Ref. No.	Part No.	Description	Remark
R917	1-218-891-11	METAL CHIP 68K 0.5% (TRV120/TRV120P)	1/16W
R917	1-218-893-11	METAL CHIP 82K 0.5% (TRV120E/TRV125E/TR8000/TR8100)	1/16W
R918	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
R919	1-216-843-11	METAL CHIP 68K 5%	1/16W
R920	1-216-837-11	METAL CHIP 22K 5%	1/16W
R921	1-216-795-11	RES-CHIP 6.8 5%	1/16W
R922	1-216-850-11	METAL CHIP 270K 5%	1/16W
R923	1-216-857-11	METAL CHIP 1M 5%	1/16W
R924	1-216-862-11	RES-CHIP 2.7M 5%	1/16W
R925	1-216-862-11	RES-CHIP 2.7M 5%	1/16W
R926	1-216-821-11	METAL CHIP 1K 5%	1/16W
R927	1-216-821-11	METAL CHIP 1K 5%	1/16W
R928	1-216-827-11	METAL CHIP 3.3K 5%	1/16W
R929	1-216-821-11	METAL CHIP 1K 5%	1/16W
R930	1-216-791-11	METAL CHIP 3.3 5%	1/16W
R931	1-217-671-11	METAL CHIP 1 5%	1/10W
R932	1-216-829-11	METAL CHIP 4.7K 5%	1/16W
		< VARIABLE RESISTOR >	
RV903	1-238-852-11	RES, ADJ, CERMET 470	
RV904	1-238-095-11	RES, ADJ, CERMET 470K	
		< TRANSFORMER >	
⚠T901	1-453-124-11	TRANSFORMER ASSY, FLYBACK	
		< FLAT CABLE >	
⚠W901	1-540-019-21	SOCKET ASSY, CRT	
		MISCELLANEOUS ***************	
10	1-676-818-31	FP-156 FLEXIBLE BOARD	
11	1-790-334-11	CABLE, FLEXIBLE FLAT (FFC-257S)	
59	1-418-801-11	SWITCH BLOCK, CONTROL (MF-10000) (TRV120/TRV120E/TRV120P/TRV125E)	
106	1-418-801-11	SWITCH BLOCK, CONTROL (MF-10000) (TR8000E/TR8100E)	
111	A-7094-826-A	INDICATION (LCD) BLOCK ASSY (SERVICE) (TR8000E/TR8100E)	
159	1-792-454-11	CABLE, FLEXIBLE FLAT (FFC-289)	
204	1-418-802-11	SWITCH BLOCK, CONTROL (PR-10000) (TRV120/TRV120P/TRV120E/TRV125E)	
206	1-960-225-11	HARNESS (DP-83) (TRV120/TRV120E/TRV120P/TRV125E)	
210	A-7094-826-A	INDICATION (LCD) BLOCK ASSY (SERVICE) (TRV120/TRV120E/TRV120P/TRV125E)	
256	1-418-800-21	SWITCH BLOCK, CONTROL (SS-10000) (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	
256	1-418-800-41	SWITCH BLOCK, CONTROL (SS-10000) (TRV120E: AEP, UK, EE, NE, RU/TRV125E/TR8000E/TR8100E)	
261	1-694-384-11	TERMINAL BOARD, BATTERY	
301	1-793-996-11	CONNECTOR, EXTERNAL	
307	1-676-822-11	FP-161 FLEXIBLE BOARD	
309	1-758-155-21	FILTER BLOCK, OPTICAL (TRV120E/TRV125E/TR8000E/TR8100E)	
309	1-758-216-21	FILTER BLOCK, OPTICAL (TRV120/TRV120P)	
311	8-848-736-01	DEVICE, LENS LSV-680A	
312	1-758-445-11	IRIS IR-680 (including FLEXIBLE BOARD)	
351	1-676-819-11	FP-157 FLEXIBLE BOARD	
355	1-676-821-11	FP-160 FLEXIBLE BOARD	
356	1-500-226-31	BEAD, FERRITE	
358	1-676-820-11	FP-159 FLEXIBLE BOARD	
365	1-418-799-41	SWITCH BLOCK, CONTROL (FK-10000) (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	
365	1-418-799-51	SWITCH BLOCK, CONTROL (FK-10000) (TRV120E: AEP, UK, EE, NE, RU/TRV125E/TR8000E/TR8100E)	
760	1-658-213-11	FP-355 FLEXIBLE BOARD	
762	1-657-786-13	FP-221 FLEXIBLE BOARD	
764	1-658-214-11	FP-356 FLEXIBLE BOARD	
803	1-657-785-11	FP-248 FLEXIBLE BOARD	
817	1-657-784-11	FP-220 FLEXIBLE BOARD	
D001	8-719-988-42	DIODE GL453	
IC101	A-7030-821-A	CCD BLOCK ASSY (CCD IMAGER) (TRV120/TRV120P) (Note)	
IC151	A-7031-072-A	CCD BLOCK ASSY (CCD IMAGER) (TRV120E/TRV125E/TR8000E/TR8100E) (Note)	
LCD901	1-803-852-21	INDICATOR MODULE LIQUID CRYSTAL (TYPE S 61K) (TRV120/TRV120P)	
LCD901	1-803-853-21	INDICATOR MODULE LIQUID CRYSTAL (TYPE S 123K) (TRV120E: AEP, UK, EE, NE, RU/TRV125E)	
LCD901	1-803-859-31	INDICATOR MODULE LIQUID CRYSTAL (TYPE C) (TRV120E: E, HK, AUS, CN, JE)	
⚠LED901	1-517-866-11	LIGHT, BACK (TRV120/TRV120E/TRV120P/TRV125E)	
⚠LED904	1-517-866-11	LIGHT, BACK (TR8000E/TR8100E)	
M901	A-7048-938-A	DRUM BLOCK ASSY (DKH-02A-R)	
M902	8-835-531-32	MOTOR, DC SCE-0601A/C-NP (CAPSTAN)	
M903	X-3945-401-1	MOTOR ASSY, DC (LOADING)	
M905	1-763-472-11	MOTOR, STEPPING (F680) (FOCUS)	
M906	1-763-471-11	MOTOR, STEPPING (Z680) (ZOOM)	
MIC5802	1-542-312-11	MICROPHONE (L)	
MIC5803	1-542-312-11	MICROPHONE (R)	
⚠ND901	1-517-751-11	TUBE, FLUORESCENT, COLD CATHODE (TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	
⚠ND901	1-517-751-21	TUBE, FLUORESCENT, COLD CATHODE (TRV120E: AEP, UK, EE, NE, RU/TRV125E)	
S001	1-692-614-11	SWITCH, PUSH (3 KEY) (Hi8 MP, ME/MP, REC PROOF)	
S002	1-572-688-11	SWITCH, PUSH (1 KEY) (C LOCK)	
S008	1-771-848-11	SWITCH, PUSH (PANEL OPEN/CLOSE) (TRV120/TRV120E/TRV120P/TRV125E)	
S901	1-762-436-15	SWITCH (ENCODER), ROTARY	
SP003	1-529-590-11	SPEAKER (2.0cm) (TRV120/TRV120E/TRV120P/TRV125E)	
⚠V901	1-452-673-61	CRT ASSY (M01KXX90WB)	

(Note) Be sure to read “Precautions for Replcement of CCD Imager” on page 4-8, 4-10 when changing the CCD imager

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Ref. No.	Part No.	Description	Remark
		ACCESSORIES & PACKING MATERIALS ********************************	
	1-475-141-61	COMMANDER, REMOTE (RMT-814)	
⚠	1-475-599-11	ADAPTOR, AC (EXCEPT TRV120: KR)	
⚠	1-475-599-71	ADAPTOR, AC (TRV120: KR)	
⚠	1-569-007-11	ADAPTOR, CONVERSION 2P (TRV120: JE/TRV120E: JE)	
⚠	1-569-008-21	ADAPTOR, CONVERSION 2P (TRV120: E, HK/TRV120E: E, HK/TRV120P: E)	
⚠	1-573-291-11	ADAPTOR, CONVERSION 21P(TRV120E: AEP, UK, EE, NE, RU/TRV125E/TR8000E/TR8100E)	
⚠	1-696-819-11	CORD, POWER (TRV120E: AUS)	
	1-765-080-11	CORD, CONNECTION (AV CONNECTING CABLE 1.5m)	
⚠	1-769-608-11	CORD, POWER (TRV120: E, BR/TRV120E: AEP, EE, NE, RU, E/TRV120P: E/TRV125E/ TR8000E: AEP, EE, NE, RU/TR8100E)	
⚠	1-776-985-11	CORD, POWER (TRV120: KR)	
⚠	1-782-476-11	CORD, POWER (TRV120E: CN)	
⚠	1-783-374-11	CORD, POWER (TRV120: HK/TRV120E: UK, HK/TR8000E: UK)	
⚠	1-783-952-11	CORD, POWER (TRV120P: AR)	
⚠	1-790-073-11	CORD, POWER 2P (TRV120: JE/TRV120E: JE)	
⚠	1-790-107-22	CORD, POWER (TRV120: US, CND)	
	3-058-871-11	MANUAL, INSTRUCTION (ENGLISH) (TRV120: US, CND, JE)	
	3-058-871-21	MANUAL, INSTRUCTION (FRENCH) (TRV120: CND)	
	3-058-871-31	MANUAL, INSTRUCTION (ENGLISH) (TRV120: E, HK/TRV120P)	
	3-058-871-41	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV120: E, JE/TRV120P: E)	
	3-058-871-51	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV120: E, HK)	
	3-058-871-61	MANUAL, INSTRUCTION (ARABIC) (TRV120: E)	
	3-058-871-71	MANUAL, INSTRUCTION (KOREAN) (TRV120: KR, JE)	
	3-058-872-11	MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV120E: UK, EE, NE, RU/TRV125E)	
	3-058-872-21	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TRV120E: AEP/TRV125E)	
	3-058-872-31	MANUAL, INSTRUCTION (ITALIAN, DUTCH) (TRV120E: AEP/TRV125E)	
	3-058-872-41	MANUAL, INSTRUCTION (GERMAN, FRENCH) (TRV120E: AEP/TRV125E)	
	3-058-872-51	MANUAL, INSTRUCTION (POLISH, SWEDISH) (TRV120E: EE, NE, RU)	
	3-058-873-11	MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TRV120E: E, HK, AUS, CN, JE)	
	3-058-873-21	MANUAL, INSTRUCTION (GERMAN, FRENCH) (TRV120E: E, JE)	
	3-058-873-31	MANUAL, INSTRUCTION (ARABIC, PERSIAN) (TRV120E: E)	
	3-058-873-41	MANUAL, INSTRUCTION (TRADITIONAL CHINESE) (TRV120E: HK, JE)	
	3-058-873-51	MANUAL, INSTRUCTION (SIMPLIFIED CHINESE) (TRV120E: E, CN)	
	3-058-874-11	MANUAL, INSTRUCTION (ENGLISH, RUSSIAN) (TR8000E: UK, EE, NE, RU/TR8100E)	
	3-058-874-21	MANUAL, INSTRUCTION (SPANISH, PORTUGUESE) (TR8000E: AEP/TR8100E)	
	3-058-874-31	MANUAL, INSTRUCTION (DUTCH, ITALIAN) (TR8000E: AEP/TR8100E)	
	3-058-874-41	MANUAL, INSTRUCTION (GERMAN, FRENCH) (TR8000E: AEP/TR8100E)	
	3-058-874-51	MANUAL, INSTRUCTION (POLISH, SWEDISH) (TR8000E: EE, NE, RU)	
	3-742-854-01	LID, BATTERY (for RMT-814)	
	3-987-015-01	BELT (S), SHOULDER	
	3-988-960-01	BAG (8500), CARRYING (TRV120P)	

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

9-929-806-12

Sony EMCS Co.

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DCR-TRV120/TRV120E/TRV120P/TRV125E/ TR8000E/TR8100E

RMT-814

SONY®

SERVICE MANUAL

2001.01

US Model
Canadian Model
DCR-TRV120
AEP Model
DCR-TRV120E/TRV125E/TR8000E/TR8100E
UK Model
East European Model
North European Model
Russian Model
DCR-TRV120E/TR8000E
E Model
DCR-TRV120/TRV120E/TRV120P
Hong Kong Model
DCR-TRV120/TRV120E
Korea Model
DCR-TRV120P
Argentina Model
DCR-TRV120P
Brazilian Model
DCR-TRV120
Australian Model
Chinese Model
DCR-TRV120E
Tourist Model
DCR-TRV120/TRV120E

SUPPLEMENT-1

File this supplement with the service manual.

(PV00-020)

- **Addition of SERVICE NOTE. (Change of IC type.)**
- **Correction of FRAME SCHEMATIC DIAGRAMS.**
- **Suffix No. of the board is changed.**
  (CF-69 board has been changed from –11 (21) to –12 (22).
  VC-235 board has been changed from –12 (22, 23) to –13 (23, 33).)
- **Correction and change of SCHEMATIC DIAGRAMS.**
- **Correction and change of ADJUSTMENTS.**
- **Change of REPAIR PARTS LIST.**

4. Change of IC (Service Manual Page 8)

4-1. Change of IC2201 type on the VC-235 board.

The type of IC2201 was changed from existing HG75C012FFL to HG75C0SFL, or to MB87M1011PFF-G-BND. In each type, the EEPROM data and mounted parts were changed.
Also, which type of IC is mounted can be checked with the adjusting remote commander.

Type check method:

1) Select page: 6, address: 6F, and set data: 01.
2) Select page: 6, and address: FF.
3) The type of IC2201 can be checked from the displayed data.

Type	Data
MB87M1011PFF-G-BND	00
HG75C012SFL	03

Data change method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: F, and input the data in the following table.
   Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to se the data.
3) Select page: 0, address: 01, and set data: 00.

HG75C012FFL, HG75C012SFL			MB87M1101PFF-G-BND		
Address	DATA		Address	DATA	
	NTSC	PAL		NTSC	PAL
23	14	15	23	1C	1D
67	69	65	67	A0	A0
68	64	72	68	AA	A8

Note: No data is changed resulting from the change from HG75C012 FFL to HG75C012SFL.

• Differences of mounted parts

IC TYPE / Ref.No.	HG75C012SFL ①	MB87M1101PFF ②	MB87M1101PFF -G-BND ③
C2214	0.1u	0.1u	××
C2222	0.1u	0.1u	××
C2224	0.1u	0.1u	××
C2236	0.1u	0.1u	××
C3349	1u	××	××
C3350	1u	××	××
C3351	0.1u	××	××
IC2201	HG75C012FFL	HG75C012SFL	MB87M1101PFF -G-BND
IC3304	TK11215BMCL	××	××
R1303	56K	330K	330K
R2223	8.2K	8.2K	××
R3306	××	0	0

- Change of IC2201 type from ①, ② to ③:
  No abnormality will arise in operation, even if C2214, C2222, C2224, C2236 and R2223 are mounted.
- Change of IC2201 type from ① to ②:
  Mount on C2214, C2222, C2224, C2236 and R2223.

4-2. Change of IC4501 on the VC-235 board.

Due to a change of IC4501 (mechanism control), the version is updated such as MP1 → MP2 → MP3 → MP4. In each version, the EEPROM data was changed.
Also, the version of IC4501 can be checked with the adjusting remote commander.

Note 1: Changing the version does not make any changes in schematic diagrams and the rest.

Note 2: Make it sure to confirm the version after replacing IC 4501.

Version check method:

1) Select page: 3, and address: FF.
2) The version of IC4501 can be checked from the displayed data.

Data	Version
12	MP1
14	MP2
15	MP3
16	MP4

Data change method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 8, and input the data in the following table.
   Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.
3) Select page: 0, address: 01, and set data: 00.

Version / Address	MP1	MP2	MP3	MP4
A5	00	01	01	01
A7	31	31	70	70
A8	05	05	28	28

4-3. Change of IC4902 on the VC-235 board.

IC4902 (VC control) has been changed to MB91192PFF-G-117-BND-ER.
Because of this change, the EEPROM data is changed.

Data change method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 6, address: FF, and set data: 06.
3) Select page: F, address: 1F, set data: C2 (NTSC) or data: E0 (PAL), and press the PAUSE button of the adjustment remote commander.
4) Select page: 0, address: 01, and set data: 00.

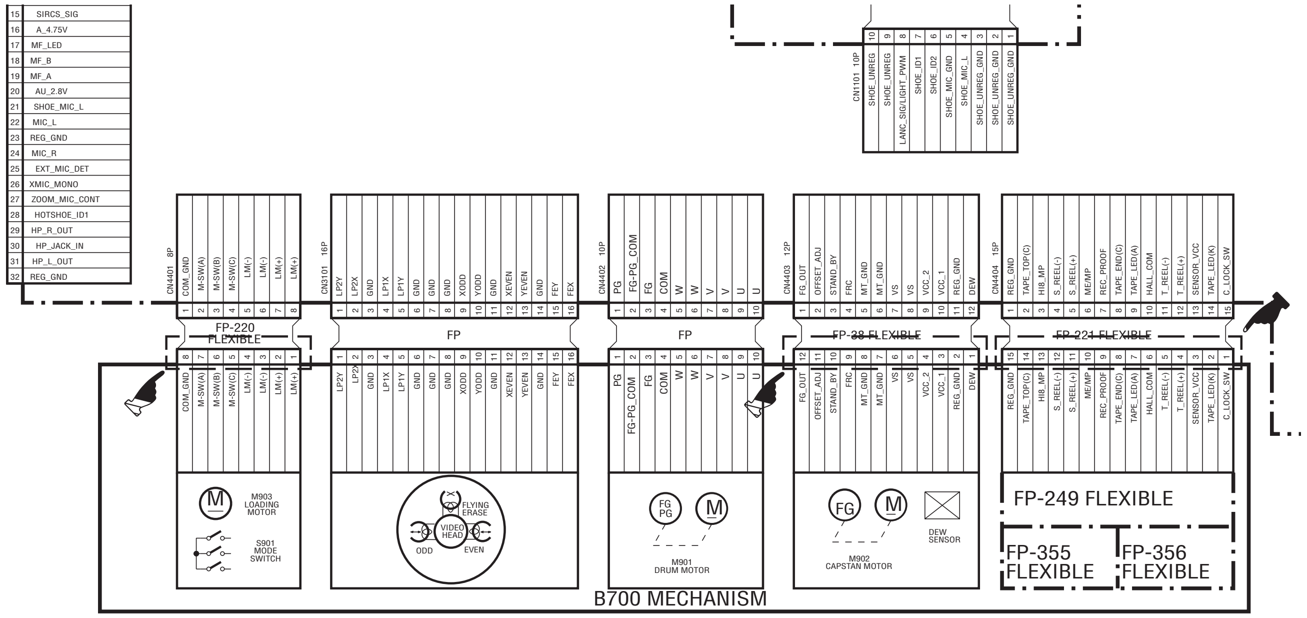
SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

☞ : Points added portion.
☛ : Points changed portion.
☛ : Points deleted portion.

4-1. FRAME SCHEMATIC DIAGRAMS

FRAME (1/2) SCHEMATIC DIAGRAM
(Service manual page 4-3, Location J-5 to O-16)

- **Correction**

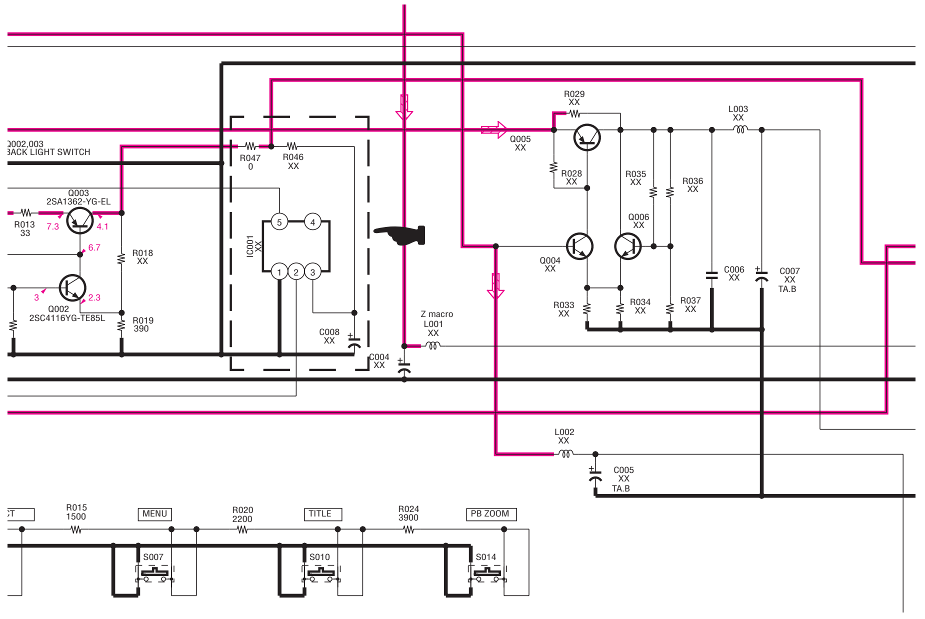

CN1101 10P
CN4401 8P
CN3101 16P
CN4402 10P
CN4403 12P
CN4404 15P
FP-220 FLEXIBLE
FP
FP-38 FLEXIBLE
FP-221 FLEXIBLE
FP-249 FLEXIBLE
FP-355 FLEXIBLE
FP-356 FLEXIBLE
B700 MECHANISM
M903 LOADING MOTOR
S901 MODE SWITCH
FLYING ERASE
VIDEO HEAD
ODD
EVEN
M901 DRUM MOTOR
M902 CAPSTAN MOTOR
DEW SENSOR

4-2. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

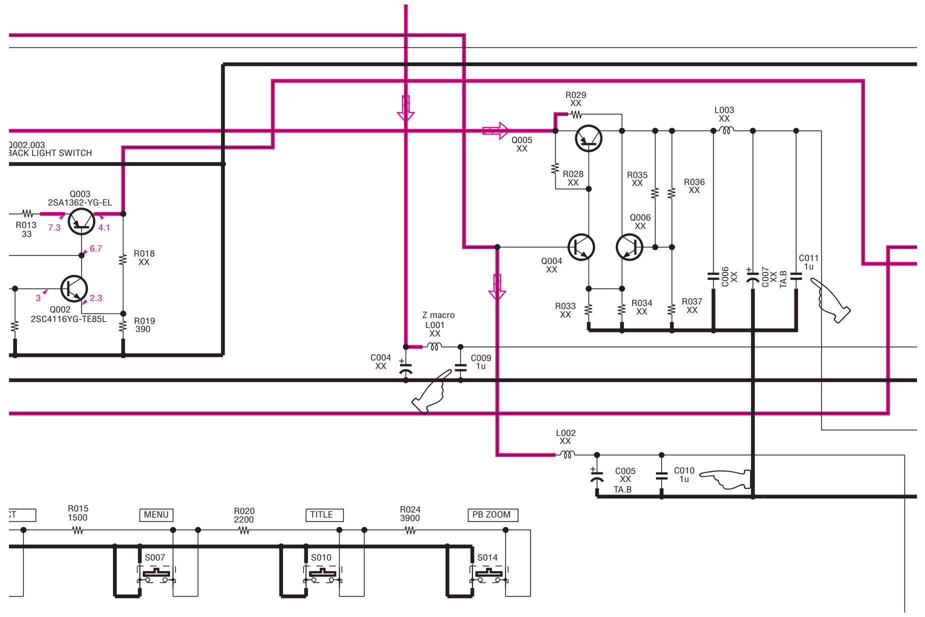
CF-69 (USER CONTROL) SCHEMATIC DIAGRAM
(Service manual page 4-64, Location B-11 to F-17)

- **Suffix No. of the board is changed (–11 (21) → –12 (22)).**

Former Type (Suffix -11)


Q002,003 BACK LIGHT SWITCH
Q003 2SA1362-YG-EL
Q002 2SC4116YG-TE85L
R013 33
R018 XX
R019 390
R047 0
R046 XX
IC001 XX
C008 XX
C004 XX
Z macro L001 XX
R029 XX
Q005 XX
R028 XX
R035 XX
R036 XX
Q006 XX
Q004 XX
R033 XX
R034 XX
R037 XX
L003 XX
C006 XX
C007 XX TA.B
L002 XX
C005 XX TA.B
R015 1500
MENU
R020 2200
TITLE
R024 3900
PB ZOOM
S007
S010
S014

New Type (Suffix -12)


Q002,003 BACK LIGHT SWITCH
Q003 2SA1362-YG-EL
Q002 2SC4116YG-TE85L
R013 33
R018 XX
R019 390
C004 XX
Z macro L001 XX
C009 1u
R029 XX
Q005 XX
R028 XX
R035 XX
R036 XX
Q006 XX
Q004 XX
R033 XX
R034 XX
R037 XX
L003 XX
C006 XX
C007 XX TA.B
C011 1u
L002 XX
C005 XX TA.B
C010 1u
R015 1500
MENU
R020 2200
TITLE
R024 3900
PB ZOOM
S007
S010
S014

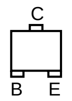
CF-69 (USER CONTROL) PRINTED WIRING BOARD

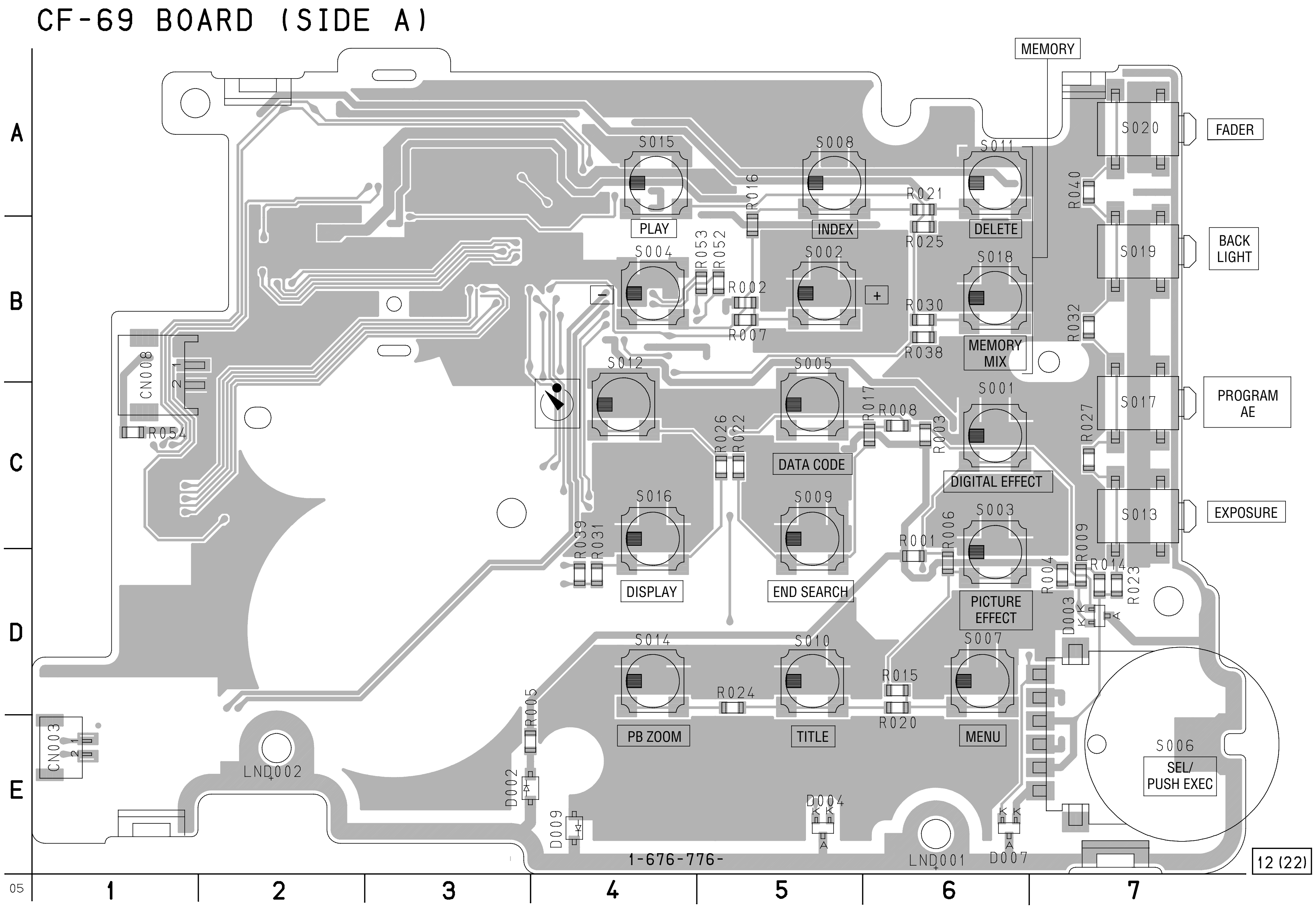
– Ref. No.: CF-69 board; 20,000 series –

– DCR-TRV120/TRV120E/TRV120P/TRV125E –

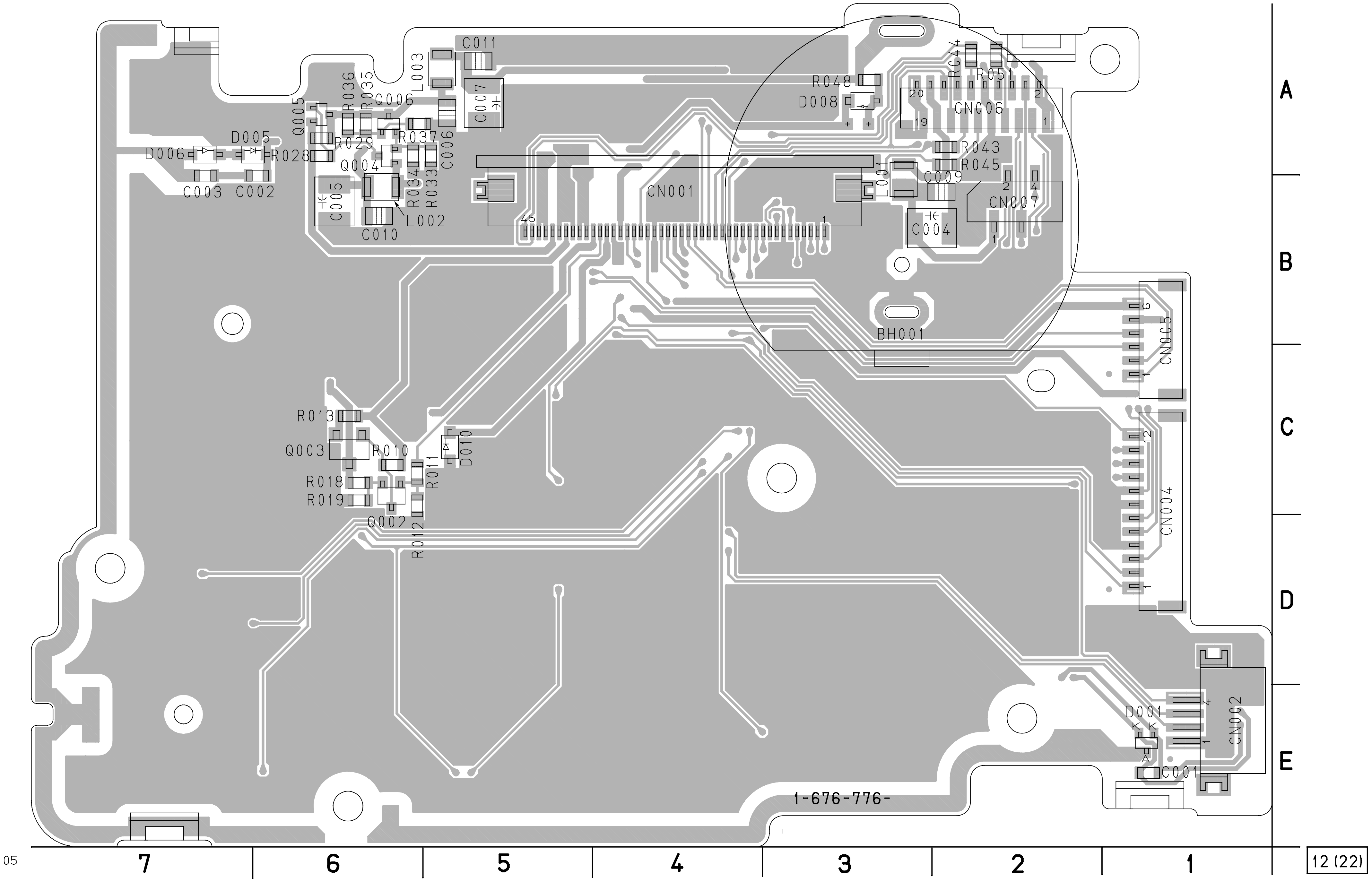
(Service manual page 4-67 to 70)

- **For Printed Wiring Board.**
- There are a few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor




CF-69 BOARD (SIDE A)
MEMORY
FADER
S020
BACK LIGHT
S019
PROGRAM AE
S017
EXPOSURE
S013
S015
PLAY
S008
INDEX
S011
DELETE
R016
R021
R025
R040
S004
R053
R052
R002
R007
S002
S018
R030
R038
MEMORY MIX
R032
CN008
2
1
R054
S012
S005
R017
R008
S001
R003
R027
R026
R022
DATA CODE
DIGITAL EFFECT
S016
S009
S003
R039
R031
R001
R006
R009
R004
R014
R023
DISPLAY
END SEARCH
PICTURE EFFECT
D003
K
A
S014
S010
S007
R015
R024
R020
R005
PB ZOOM
TITLE
MENU
S006
SEL/ PUSH EXEC
CN003
LND002
D002
D009
D004
LND001
D007
1-676-776-
12 (22)
A
B
C
D
E
05
1
2
3
4
5
6
7

CF-69 BOARD (SIDE B)

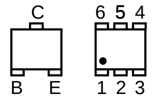

C011
L003
C007
R036
R035
Q006
Q005
R029
R037
C006
D005
D006
R028
Q004
C003
C002
C005
R034
R033
C010
L002
CN001
45
1
R048
D008
R044
R051
20
2
CN006
19
1
R043
R045
L001
C009
CN007
2
4
C004
BH001
CN005
6
1
12
CN004
R013
Q003
R010
R018
R019
R011
D010
Q002
R012
D001
CN002
4
1
C001
1-676-776-
A
B
C
D
E
7
6
5
4
3
2
1
12 (22)
05

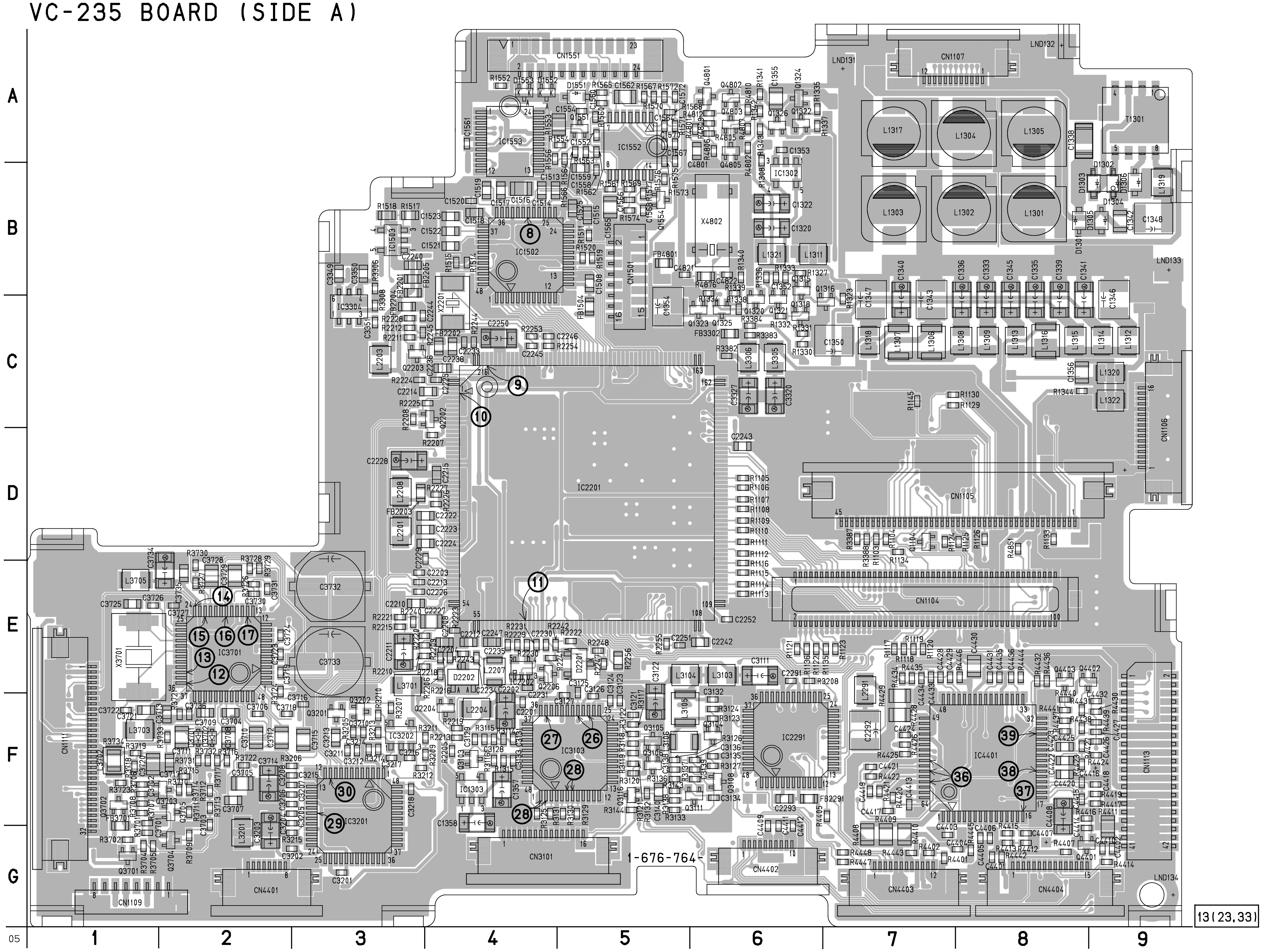
VC-235 (CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER) PRINTED WIRING BOARD

– Ref. No.: VC-235 board; 10,000 series –

(Service manual page 4-11 to 14)

- **For Printed Wiring Board.**
- VC-235 board is eight-layer print board. However, the patterns of layers 2 to 7 have not been included in the diagram.
- There are a few cases that the part isn't mounted in this model is printed on this diagram.
- Chip transistor

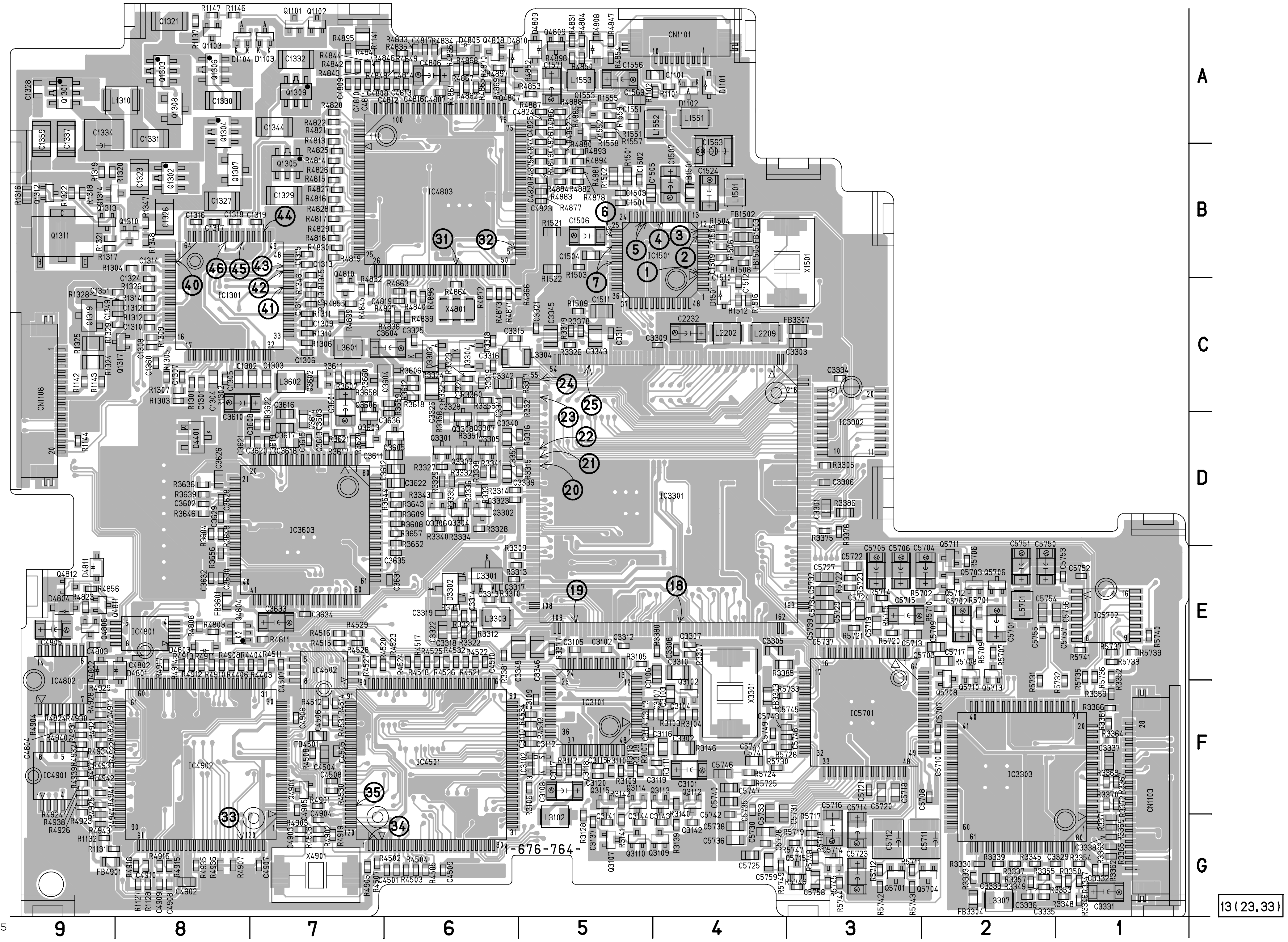



VC-235 BOARD (SIDE A)
A
B
C
D
E
F
G
1
2
3
4
5
6
7
8
9
05
IC1502
IC1552
IC1553
IC1302
IC2201
IC3701
IC3201
IC3103
IC2291
IC4401
CN1551
CN1107
CN1106
CN1105
CN1104
CN1109
CN4401
CN3101
CN4402
CN4403
CN4404
CN1111
CN1113
X4802
X3701
T1301
L1317
L1304
L1305
L1303
L1302
L1301
LND131
LND132
LND133
LND134
1-676-764-
13(23,33)
⑧
⑨
⑩
⑪
⑫
⑬
⑭
⑮
⑯
⑰
㉖
㉗
㉘
㉙
㉚
㊱
㊲
㊳
㊴

CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER

VC-235

VC-235 BOARD (SIDE B)


A
B
C
D
E
F
G
9
8
7
6
5
4
3
2
1
13(23,33)
05
1-676-764-
IC4803
IC1501
IC1301
IC3603
IC3301
IC3302
IC4801
IC4802
IC4902
IC4502
IC4501
IC3101
IC5701
IC5702
IC3303
IC4901
X1501
X4801
X3301
X4901
CN1101
CN1108
CN1103

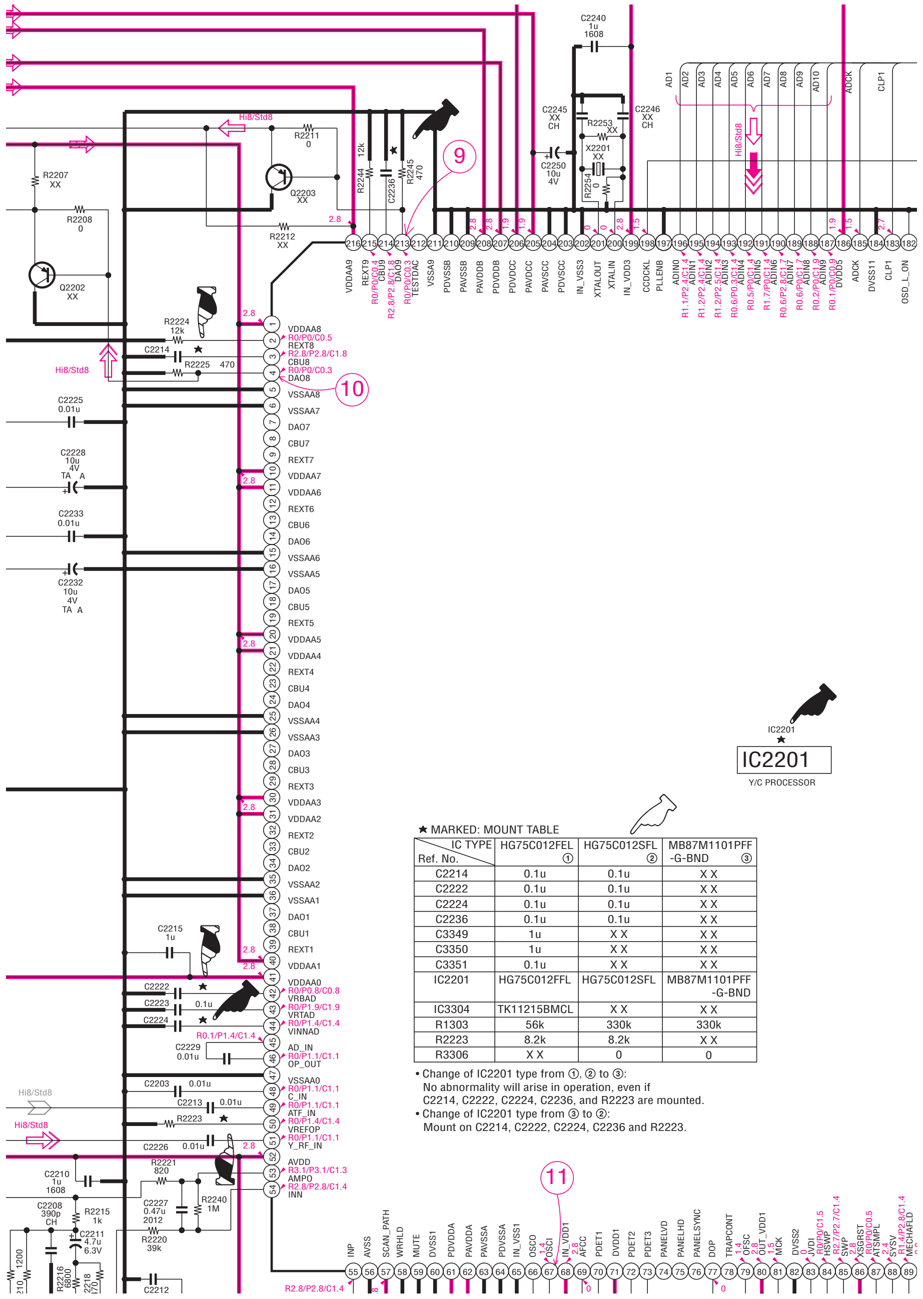
CAMERA PROCESSOR, Y/C PROCESSOR, LENS MOTOR DRIVE, VIDEO/AUDIO IN/OUT, BASE BAND INPUT, VIDEO/AUDIO DSP, DV INTERFACE, OSD, A/D CONVERTER, REC/PB AMP, Hi8/Std8 PB AMP, HI/MECHANISM/CAMERA CONTROL, SERVO, D/A CONVERTER, DC/DC CONVERTER

VC-235

☞ : Points added portion.
☛ : Points changed portion.

VC-235 (Y/C PROCESSOR) SCHEMATIC DIAGRAM
(Service manual page 4-17, 18, Location B-6 to K-12)

- Change of IC2201 type


IC2201
IC2201
Y/C PROCESSOR
9
10
11
Hi8/Std8

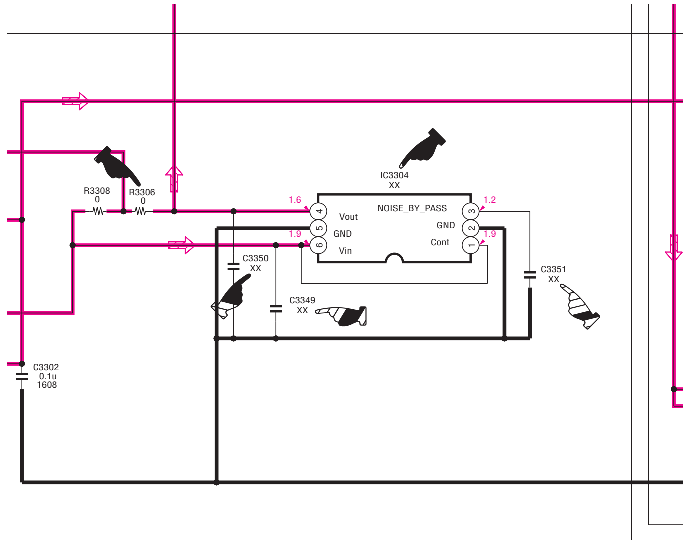
★ MARKED: MOUNT TABLE

IC TYPE / Ref. No.	HG75C012FEL ①	HG75C012SFL ②	MB87M1101PFF -G-BND ③
C2214	0.1u	0.1u	X X
C2222	0.1u	0.1u	X X
C2224	0.1u	0.1u	X X
C2236	0.1u	0.1u	X X
C3349	1u	X X	X X
C3350	1u	X X	X X
C3351	0.1u	X X	X X
IC2201	HG75C012FFL	HG75C012SFL	MB87M1101PFF -G-BND
IC3304	TK11215BMCL	X X	X X
R1303	56k	330k	330k
R2223	8.2k	8.2k	X X
R3306	X X	0	0

- Change of IC2201 type from ①, ② to ③:
  No abnormality will arise in operation, even if C2214, C2222, C2224, C2236, and R2223 are mounted.
- Change of IC2201 type from ③ to ②:
  Mount on C2214, C2222, C2224, C2236 and R2223.

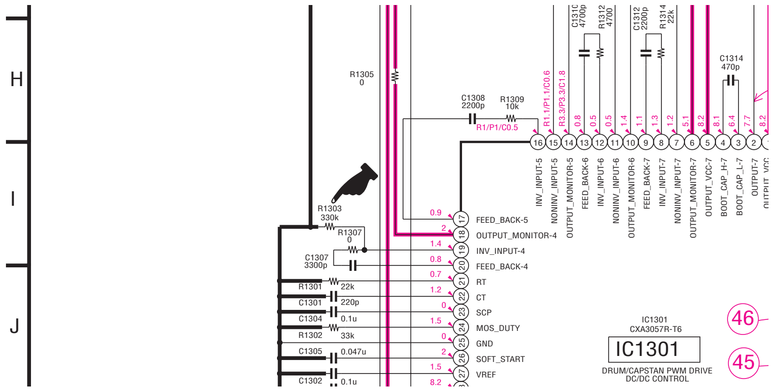
VC-235 (DV INTERFACE, OSD) SCHEMATIC DIAGRAM
(Service manual page 4-27, Location E-4 to H-8)

- Change of IC2201 type


IC3304
XX
NOISE_BY_PASS
Vout
GND
Vin
Cont
R3308
0
R3306
0
C3350
XX
C3349
XX
C3351
XX
C3302
0.1u
1608

VC-235 (DC/DC CONVERTER) SCHEMATIC DIAGRAM
(Service manual page 4-45, Location H-1 to J-6)

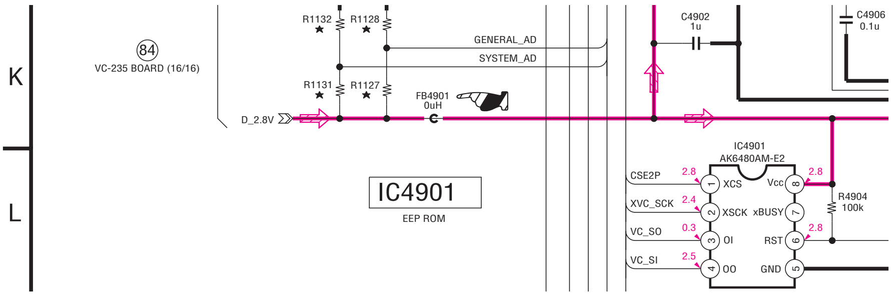
- Change of IC2201 type


H
I
J
R1303
330k
R1305
0
IC1301
CXA3057R-T6
IC1301
DRUM/CAPSTAN PWM DRIVE
DC/DC CONTROL
46
45

☛ : Points changed portion.

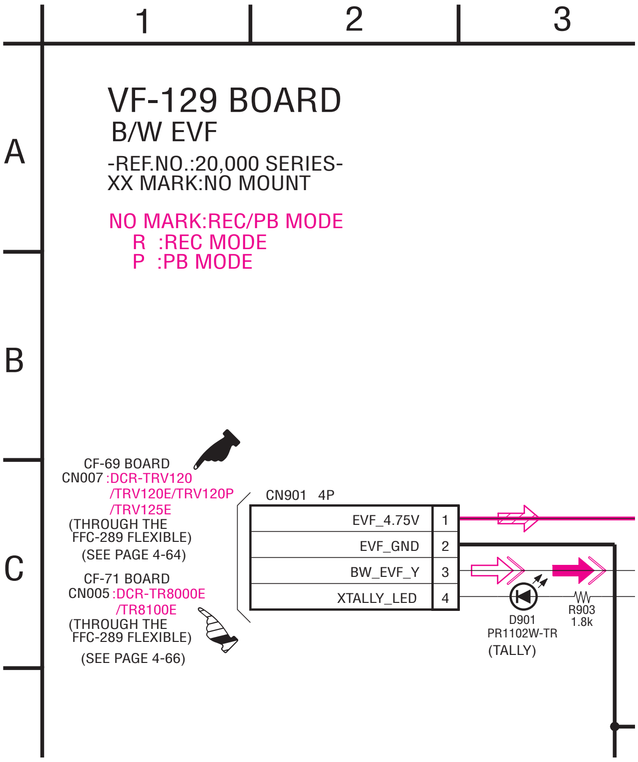
VC-235 (CAMERA CONTROL, Hi8/Std8 MECHANISM CONTROL) SCHEMATIC DIAGRAM
(Service manual page 4-37, Location K-1 to L-6)

- **Correction**


K
L
84
VC-235 BOARD (16/16)
R1132
R1128
R1131
R1127
GENERAL_AD
SYSTEM_AD
FB4901
0uH
D_2.8V
C4902
1u
C4906
0.1u
IC4901
EEP ROM
IC4901
AK6480AM-E2
CSE2P
XVC_SCK
VC_SO
VC_SI
2.8
2.4
0.3
2.5
1 XCS
2 XSCK
3 OI
4 OO
8 Vcc
7 xBUSY
6 RST
5 GND
2.8
2.8
R4904
100k

VF-129 (B/W EVF) SCHEMATIC DIAGRAM
(Service manual page 4-73, Location A-1 to D-3)

- **Correction**


1
2
3
A
B
C
VF-129 BOARD
B/W EVF
-REF.NO.:20,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
R :REC MODE
P :PB MODE
CF-69 BOARD
CN007 :DCR-TRV120
/TRV120E/TRV120P
/TRV125E
(THROUGH THE
FFC-289 FLEXIBLE)
(SEE PAGE 4-64)
CF-71 BOARD
CN005 :DCR-TR8000E
/TR8100E
(THROUGH THE
FFC-289 FLEXIBLE)
(SEE PAGE 4-66)
CN901 4P
EVF_4.75V 1
EVF_GND 2
BW_EVF_Y 3
XTALLY_LED 4
D901
PR1102W-TR
(TALLY)
R903
1.8k

SECTION 5
ADJUSTMENT

• Main Point of Change

PAGE	Name of Adjustment	Main Point of Change
1-5. LCD SYSTEM ADJUSTMENTS		
5-29	3. VCO Adjustment	Correction
5-30	5. Contrast Adjustment	Correction
5-31	7. V-COM Adjustment	Correction
3-2. SYSTEM CONTROL SYSTEM ADJUSTMENT		
5-40	2-2. Input of Serial No.	Correction
3-3. SERVO AND RF SYSTEM ADJUSTMENTS		
5-43	2. PLL f_0 & LPF f_0 Pre-adjustment	Change of specified value and adjusting method
5-45	6. PLL f_0 & LPF f_0 Final Adjustment	Change of specified value and adjusting method
4-3. SERVICE MODE		
5-61	6. Record of Use Check	Correction

☛ : Points changed portion.

1-5. LCD SYSTEM ADJUSTMENTS (DCR-TRV120/TRV120E/TRV120P/TRV125E)

3. VCO Adjustment (PD-117 board) (Service manual page 5-29)

6) Calculate D_{A3}' using following equations (decimal calculation), convert it to a hexdecimal number, and obtain D_{A3}.
   TYPE C model: $D_{A3}' = D_{A2}' - 16$
   TYPE S 123 k model: $D_{A3}' = D_{A2}' - 23$
   Note2: If $D_{A3}' < 0$, then D_{A3} = “00” ☛

5. Contrast Adjustment (PD-117 board) (Service manual page 5-30)

2) Select page: D, address: AA, change the data and set the voltage (A) between the pedestal (0 IRE) and 100 IRE to the specified value.
   (The data of address: AA, should be “00” to “7F”) ☛

7. V-COM Adjustment (PD-117 board) (Service manual page 5-31)

Set the DC bias of the common electrode drive signal of LCD to the specified value.
If deviated, the LCD display will move, producing flicker and conspicuous vertical lines.

Mode	Camera
Subject	Arbitrary
Measurement Point	Check on LCD display
Measuring Instrument	
Adjustment Page	D
Adjustment Address	A4

Note: Perform “RGB AMP Adjustment”, “Contrast Adjustment” and “COM AMP Adjustment” before this adjustments. ☛

3-2. SYSTEM CONTROL SYSTEM ADJUSTMENT

2-2. Input of Serial No. (Service manual page 5-40)

10) Enter H_4 to address: EF on page: C. ☛
    Example: If H_4 = 39,
    select page: C, address: EF, and set data: 39, then press the PAUSE button.

3-3. SERVO AND RF SYSTEM ADJUSTMENTS

2. PLL f_0 & LPF f_0 Pre-adjustment (VC-235 board) (Service manual page 5-43)

Mode	VTR stop
Measurement Point	Display data of page: 3, address: 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	1F, 20, 22, 29
Specified Value	Data of page: 3, address: 02 is changed to “00” within 10 seconds, and data of page: 3, address: 03 is “00”

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 30, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 02, and check that the data changes to “00” within 10 seconds.
   Note: If it takes more than 10 seconds for changing data, there are some errors.
4) Select page: 3, address: 03, and check that the data is “00”.
   Note: If data is not “00”, there are some errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)

Bit value of page: 3, address: 03	Error contents
bit 6 = 1	LPF f_0 adjustment is defective
bit 2 = 1 or bit3 = 1	PLL f_0, fine adjustment is defective
bit 4 = 1 or bit5 = 1	PLL f_0, adjustment is defective

If it takes more than 10 seconds for changing data of page: 3, address: 02, or any of bit value from bit 2 to bit 5 of page: 3, address: 03 is “1”, select page: C, address: 21, set the following data, and press the PAUSE button, and repeat steps 2) to 4).

	Setting data
When the data of page: C, address: 21 is “CA”	CE
When the data of page: C, address: 21 is “CE”	C6
When the data of page: C, address: 21 is “C6”	D2
When the data of page: C, address: 21 is “D2”	C2

5) Select page: 0, address: 01, and set data: 00.

6. PLL f_0 & LPF f_0 Final Adjustment (VC-235 board) (Service manual page 5-45)

Mode	VTR stop
Signal	Arbitrary
Measurement Point	Display data of page: 3, address: 03
Measuring Instrument	Adjustment remote commander
Adjustment Page	C
Adjustment Address	1F, 20, 22, 29
Specified Value	Data of page: 3, address: 02 is changed to “00” within 10 seconds, and data of page: 3, address: 03 is “00”

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: 3, address: 01, set data: 30, and press the PAUSE button of the adjustment remote commander.
3) Select page: 3, address: 02, and check that the data changes to “00” within 10 seconds.
   Note: If it takes more than 10 seconds for changing data, there are some errors.
4) Select page: 3, address: 03, and check that the data is “00”.
   Note: If data is not “00”, there are some errors. For the error contents, see the following table. (For the bit values, refer to “5-4. SERVICE MODE”, “4-3. 3. Bit value discrimination”)

Bit value of page: 3, address: 03	Error contents
bit 6 = 1	LPF f_0 adjustment is defective
bit 2 = 1 or bit3 = 1	PLL f_0, fine adjustment is defective
bit 4 = 1 or bit5 = 1	PLL f_0, adjustment is defective

5) Select page: 0, address: 01, and set data: 00.

4-3. SERVICE MODE

6. Record of Use Check
(Service manual page 5-61)

Page 2	Address A2 to AA

Address	Function		Remarks
A2	Drum rotation ☛	Minute	
A3	counted time	Hour (L)	10th place digit and 1st place digit of counted time (decimal digit)
A4	(BCD code) ☛	Hour (H)	1000th place digit and 100th place digit of counted time (decimal digit)
A5	User initial power	Year	After setting the clock, set the date of power on next
A6	on date	Month	
A7	(BCD code)	Day	
A8	Final condensation	Year	
A9	occurrence date	Month	
AA	(BCD code)	Day	

SECTION 6
REPAIR PARTS LIST

6-1. EXPLODED VIEWS

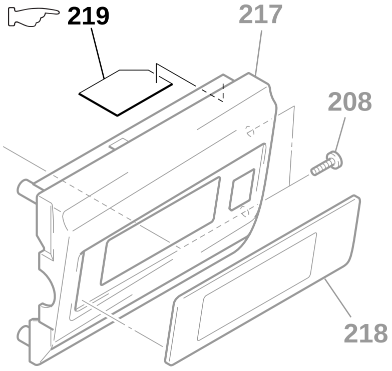
☞ : Points added portion.
☛ : Points changed portion.

NOTE:
- Items marked "*" are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- Abbreviation
  BR: Brazilian model

6-1-4. EVF BLOCK SECTION
(Service manual page 6-4)

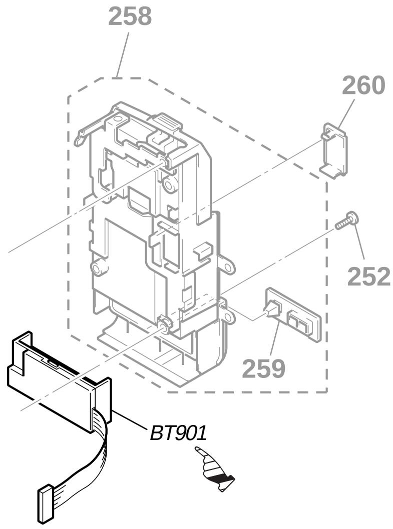
Former Type				New Type			
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
153	X-3950-234-1	BASE (B) (100) ASSY, VF		153	X-3950-234-3	BASE (B) (100) ASSY, VF	

6-1-5. LCD ASSEMBLY SECTION
(TRV120/TRV120E/TRV120P/TRV125E)
(Service manual page 6-5)



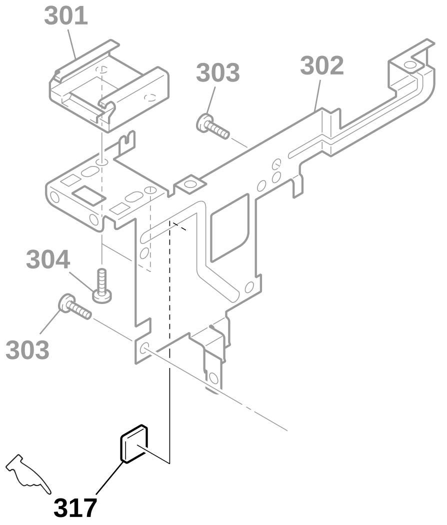
Former Type				New Type			
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
				* 219	3-061-970-01	SHEET (101), ELECTROSTATIC	

6-1-6. CABINET (L) SECTION (Service manual page 6-6)



Former Type				New Type			
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
258	X-3950-496-1	PANEL ASSY, BATTERY (TRV120: BR)		258	X-3950-496-3	PANEL ASSY, BATTERY (TRV120: BR)	
261	1-694-384-11	TERMINAL BOARD, BATTERY		BT901	1-694-384-11	TERMINAL BOARD, BATTERY	

6-1-7. LENS BLOCK SECTION (Service manual page 6-7)



Former Type				New Type			
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
				* 317	3-062-843-01	SPACER, FRAME	

6-2. ELECTRICAL PARTS LIST

- **Suffix No. of the board is changed**

Page	Former Type (Suffix-11)				New Type (Suffix-12)			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		A-7074-268-A	CF-69 BOARD, COMPLETE (TRV120/TRV120E/TRV120P/TRV125E) ********************** (Ref. No. 20,000 Series)			A-7074-268-A	CF-69 BOARD, COMPLETE (TRV120/TRV120E/TRV120P/TRV125E) ************************ (Ref. No. 20,000 Series)	
6-12		—			C009	1-164-346-11	CERAMIC CHIP 1uF	16V
		—			C010	1-164-346-11	CERAMIC CHIP 1uF	16V
		—			C011	1-164-346-11	CERAMIC CHIP 1uF	16V
6-13	R047	1-216-864-11	METAL CHIP 0 5%	1/16W		—		

- **Change of IC type**

Page	Former Type				New Type			
	Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
		A-7094-782-A	VC-235 BOARD, COMPLETE (SERVICE) (TRV120/TRV120P)			A-7094-782-A	VC-235 BOARD, COMPLETE (SERVICE) (TRV120/TRV120P)	
		A-7094-783-A	VC-235 BOARD, COMPLETE (SERVICE) (TRV120E/TRV125E)			A-7094-783-A	VC-235 BOARD, COMPLETE (SERVICE) (TRV120E/TRV125E)	
		A-7094-784-A	VC-235 BOARD, COMPLETE (SERVICE) (TR8000E/TR8100E) ************************************ (Ref. No. 20,000 Series)			A-7094-784-A	VC-235 BOARD, COMPLETE (SERVICE) (TR8000E/TR8100E) ************************************ (Ref. No. 20,000 Series)	
6-21	C2214	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C2214	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V (TYPE A) (Note 3)
	C2222	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C2222	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V (TYPE A) (Note 3)
	C2224	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C2224	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V (TYPE A) (Note 3)
	C2236	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V	C2236	1-107-826-11	CERAMIC CHIP 0.1uF 10%	16V (TYPE A) (Note 3)
6-22	C3349	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V		—		
	C3350	1-125-837-91	CERAMIC CHIP 1uF 10%	6.3V		—		
	C3351	1-125-777-11	CERAMIC CHIP 0.1uF 10%	10V		—		
6-24	IC2201	8-759-599-07	IC HG75C012FFL		IC2201	8-759-677-85	IC MB87M1011PFF-G-BND (TYPE B)	(Note 2)
		—			IC2201	8-759-670-78	IC HG75C012SFL (TYPE A) (Note 2)	
	IC3304	8-759-643-08	IC TK11215BMCL			—		
	IC4501	8-759-669-94	IC MB91192PFF-G-109-BND-ER		IC4501	8-759-684-49	IC MB91192PFF-G-116-BND-ER	(Note 2)
	IC4803	8-759-641-50	IC S579612PZ-TEB		IC4803	8-759-683-52	IC S579632PZ-TEB	
	IC4902	8-759-665-32	IC MB91192PFF-G-108-BND-ER		IC4902	8-759-686-05	IC MB91192PFF-G-117-BND-ER	(Note 2)
6-26	R1303	1-218-974-11	METAL CHIP 56K 0.50%	1/16W	R1303	1-208-947-11	METAL CHIP 330K 0.50%	1/10W
	R2223	1-218-964-11	RES-CHIP 8.2K 5%	1/16W	R2223	1-218-964-11	RES-CHIP 8.2K 5%	1/16W (TYPE A) (Note 3)
6-27		—			R3306	1-218-990-11	SHORT 0	

Note 1: TYPE A: HG75C012SFL type
TYPE B: MB87M1011PFF-G-BND type

Note 2: There are two types of the latest IC2201.
Changing the data is needs when IC2201, IC4501 or IC4902 is replaced. Please refer to the SERVICE NOTE (page 2) in this manual.

Note 3: No abnormality will arise in operation, even if C2214, C2222, C2224, C2236 and R2223 are mounted with MB87M1011PFF-G-BND type (TYPE B).

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DCR-TRV120/TRV120E/TRV120P/TRV125E/ TR8000E/TR8100E

RMT-814

US Model
Canadian Model
DCR-TRV120
AEP Model
DCR-TRV120E/TRV125E/TR8000E/TR8100E
UK Model
East European Model
North European Model
Russian Model
DCR-TRV120E/TR8000E
E Model
DCR-TRV120/TRV120E/TRV120P
Hong Kong Model
DCR-TRV120/TRV120E
Korea Model
DCR-TRV120P
Argentina Model
DCR-TRV120P
Brazilian Model
DCR-TRV120
Australian Model
Chinese Model
DCR-TRV120E
Tourist Model
DCR-TRV120/TRV120E

SERVICE MANUAL

2001. 05

SUPPLEMENT-2

File this supplement with the service manual.

(PV01-004)

- **Addition of SERVICE NOTE. (LCD TYPE CHECK)**
- **Addition of LCD TYPE (TYPE SO)**
  (Addition of PD-133 board
  Addition of LCD SYSTEM ADJUSTMENTS (TYPE SO))
- **Change of ADJUSTMENTS.**

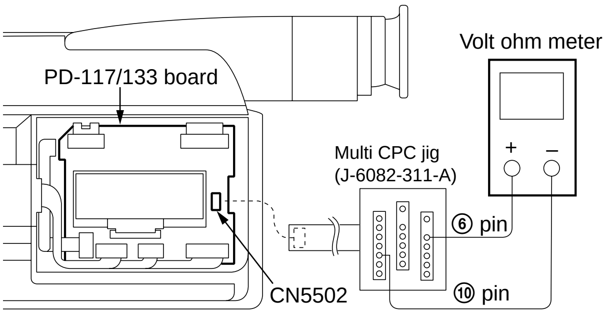
When the machine needs to be repaired, please refer to page 2 to discriminate the type of LCD.

5. LCD TYPE CHECK (DCR-TRV120/TRV120E/TRV120P/TRV125E)

By measuring the resistor value between Pin ⑥ of CN5502 and Pin ⑩ of CN5502 on PD-117/133 board, the type of LCD can be discriminated.

Note 1: About PD-117/133 board and LCD module, discriminate LCD type on the machine, and replace the same type.

Note 2: To adjust the LCD, refer to “1-5. LCD SYSTEM ADJUSTMENTS” for PD-117 board and “1-6. LCD SYSTEM ADJUSTMENTS (TYPE SO)” for PD-133 board.



PD-117/133 board CN5502

Resistor value	LCD type	PD board
1 kΩ	TYPE S 61 k	PD-117 (TYPE S 61 k)
1.5 kΩ	TYPE C	PD-117 (TYPE C)
2.2 kΩ	TYPE S 123 k	PD-117 (TYPE S 123 k)
22 kΩ	TYPE SO 61 k	PD-133 (TYPE SO 61 k)
33 kΩ	TYPE SO 123 k	PD-133 (TYPE SO 123 k)

6. DIFFERENCES OF MOUNTED PARTS

Different type of IC5501 (RGB driver) have different parts mounted on PD-133 board.
When the current IC is replaced to the different type, also replace the following parts.

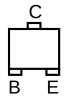
IC TYPE / Ref. No.	RB5P004AM1	CXA3579R-T4
C5527	0.01u	××
IC5501	RB5P004AM1	CXA3579R-T4
R5505	15 k	××
R5591	100 k	180 k
R5592	100 k	33 k
R5593	100 k	33 k
R5594	100 k	33 k

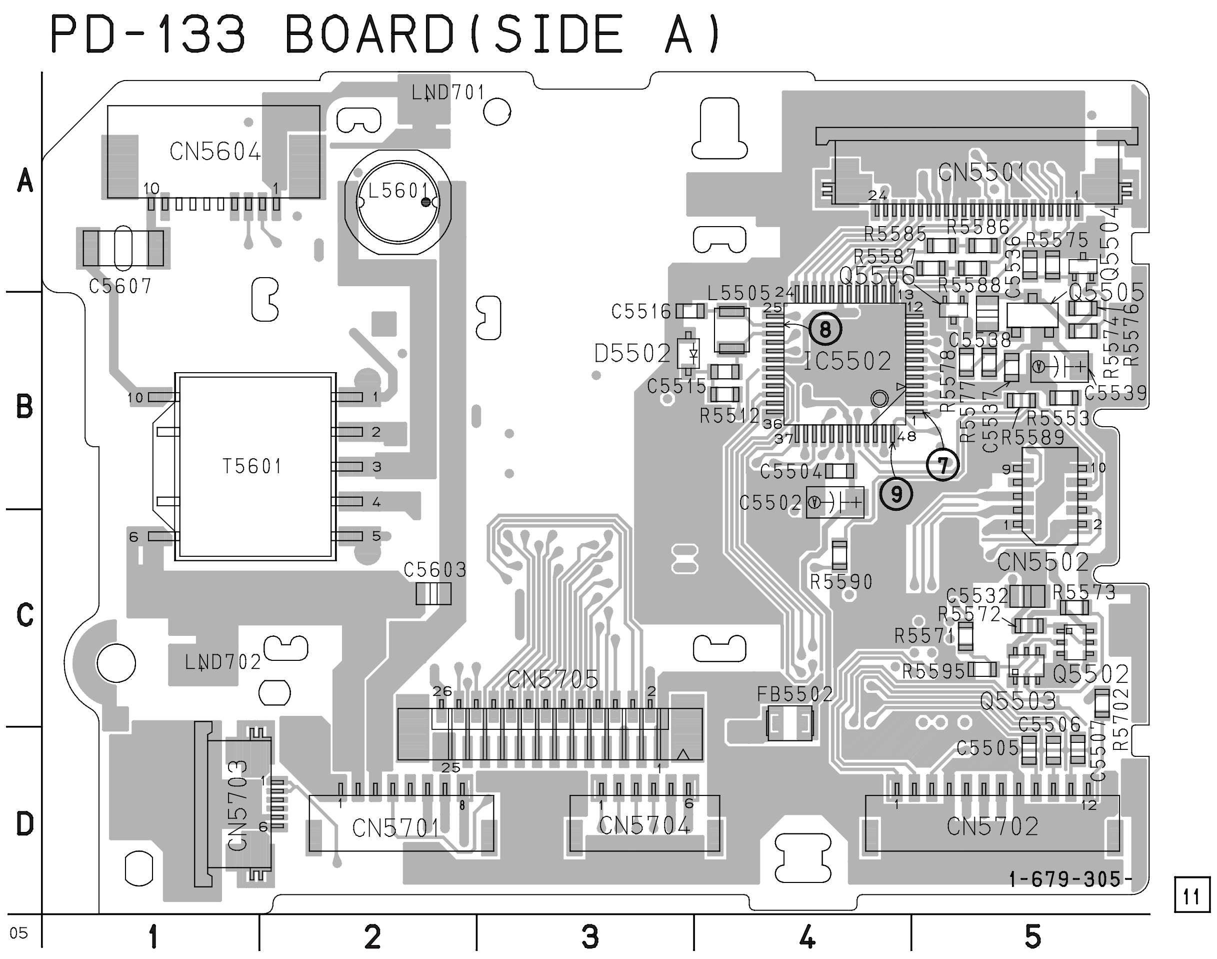
SECTION 4
PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

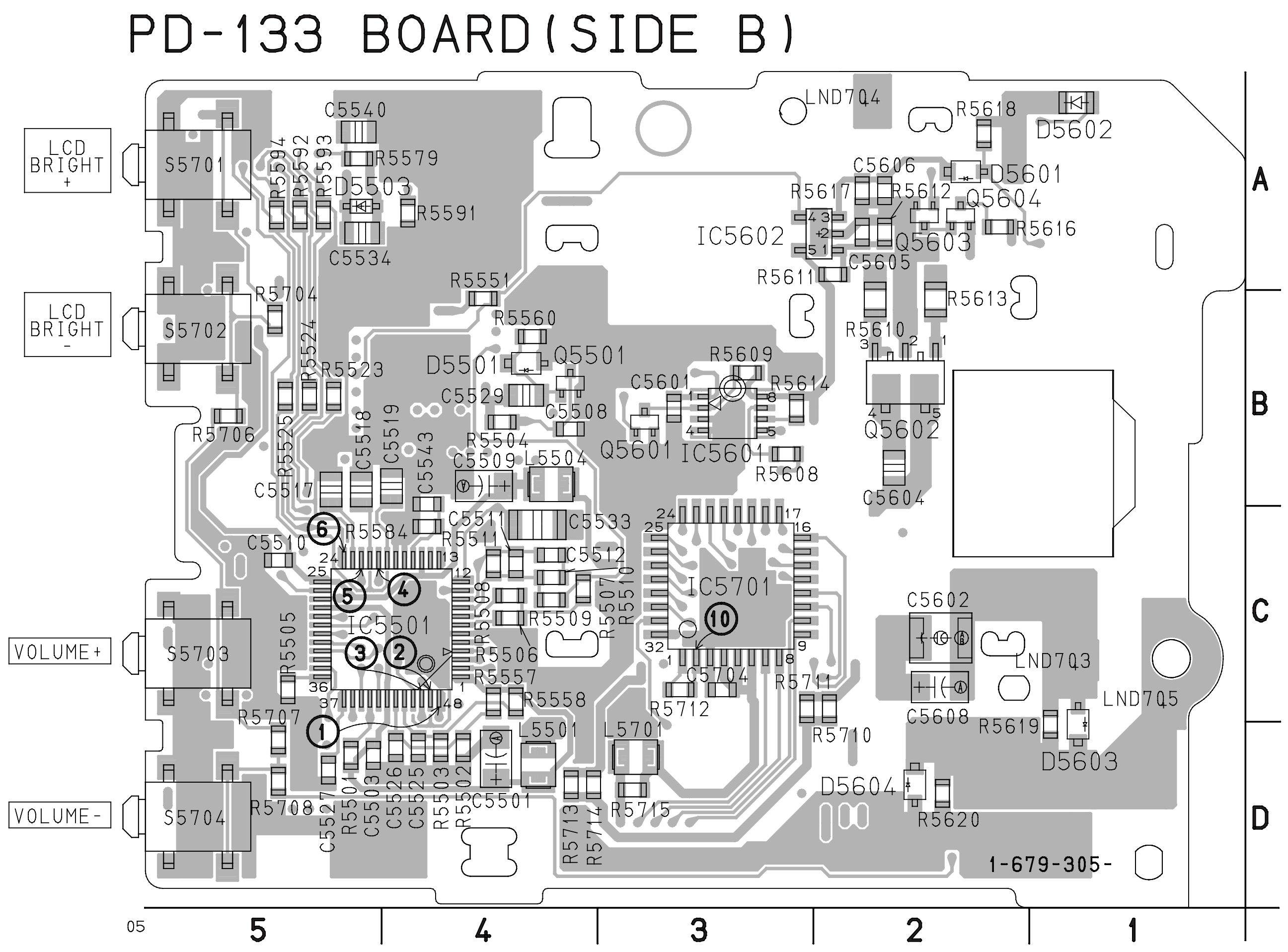
PD-133 (RGB/CG LCD DRIVER, TIMING GENERATOR, BACK LIGHT) PRINTED WIRING BOARD

– Ref. No.: PD-133 board; 40,000 series –

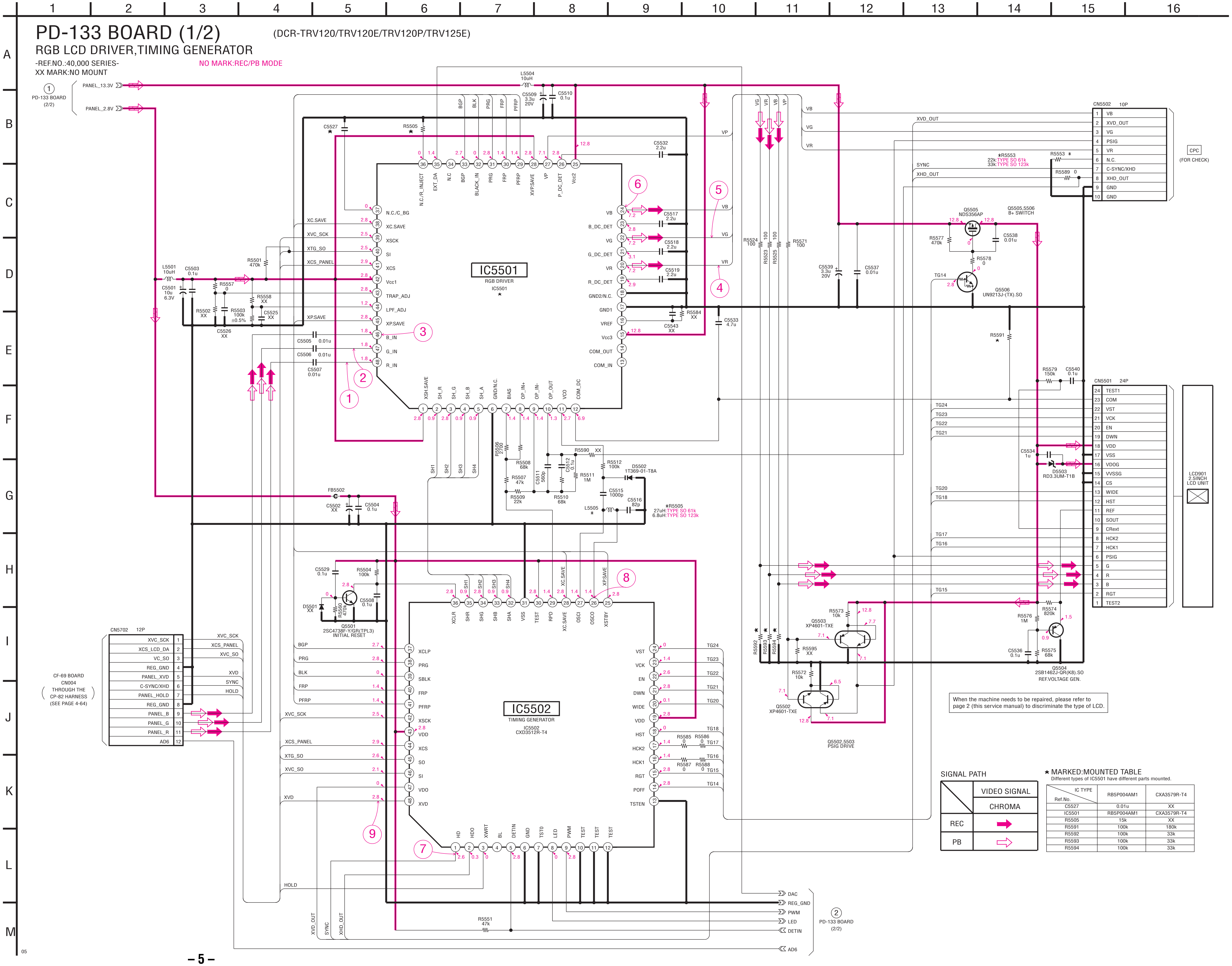
- **For Printed Wiring Board.**
- PD-133 board is four-layer print board. However, the patterns of layers 2 to 3 have not been included in the diagram.
- There are few cases that the part isn't mounted in this model is printed on this diagram.
- See page 10 for printed parts location.
- Chip transistor




PD-133 BOARD(SIDE A)
A
B
C
D
1
2
3
4
5
05
LND701
CN5604
L5601
C5607
CN5501
R5585
R5586
R5587
R5575
Q5506
R5588
C5536
Q5504
Q5505
C5516
L5505
IC5502
D5502
C5538
R5574
R5576
C5515
R5512
R5578
R5577
C5537
R5553
C5539
R5589
C5504
C5502
R5590
CN5502
T5601
C5603
C5532
R5573
R5572
R5571
R5595
Q5502
Q5503
LND702
CN5705
FB5502
C5506
C5505
C5507
R5702
CN5703
CN5701
CN5704
CN5702
1-679-305-
11


PD-133 BOARD(SIDE B)
LCD BRIGHT +
LCD BRIGHT -
VOLUME+
VOLUME-
A
B
C
D
5
4
3
2
1
05
C5540
LND704
R5618
D5602
S5701
R5594
R5592
R5593
R5579
D5503
R5591
C5534
C5606
D5601
R5617
R5612
Q5604
IC5602
Q5603
R5616
R5611
C5605
R5704
R5551
R5613
S5702
R5524
R5560
R5610
R5523
D5501
Q5501
R5609
C5601
R5614
C5529
C5508
R5706
Q5601
IC5601
Q5602
R5525
C5518
C5519
C5543
R5504
C5509
L5504
R5608
C5517
C5604
C5511
C5533
R5584
R5511
C5510
C5512
IC5701
R5508
R5507
R5510
IC5501
S5703
R5505
R5509
R5506
C5602
LND703
R5557
C5704
R5711
LND705
R5707
R5558
R5712
C5608
R5619
L5501
L5701
R5710
D5603
S5704
R5708
C5527
R5501
C5503
C5526
C5525
R5503
R5502
C5501
R5713
R5714
R5715
D5604
R5620
1-679-305-
11

PD-133 (RGB LCD DRIVER, TIMING GENERATOR) SCHEMATIC DIAGRAM • See page 3 for PD-133 printed wiring board. • See page 9 for waveforms.


1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16
A B C D E F G H I J K L M
PD-133 BOARD (1/2)
(DCR-TRV120/TRV120E/TRV120P/TRV125E)
RGB LCD DRIVER,TIMING GENERATOR
-REF.NO.:40,000 SERIES-
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
PD-133 BOARD (2/2)
PANEL_13.3V
PANEL_2.8V
IC5501
RGB DRIVER
IC5501
IC5502
TIMING GENERATOR
IC5502
CXD3512R-T4
Q5501
2SC4738F-Y/GR(TPL3)
INITIAL RESET
Q5505
NDS356AP
Q5505,5506
B+ SWITCH
Q5506
UN9213J-(TX).SO
Q5503
XP4601-TXE
Q5502
XP4601-TXE
Q5502,5503
PSIG DRIVE
Q5504
2SB1462J-QR(K8).SO
REF.VOLTAGE GEN.
D5503
RD3.3UM-T1B
D5502
1T369-01-T8A
CN5502 10P
1 VB
2 XVD_OUT
3 VG
4 PSIG
5 VR
6 N.C.
7 C-SYNC/XHD
8 XHD_OUT
9 GND
10 GND
CPC
(FOR CHECK)
CN5501 24P
24 TEST1
23 COM
22 VST
21 VCK
20 EN
19 DWN
18 VDD
17 VSS
16 VDDG
15 VVSSG
14 CS
13 WIDE
12 HST
11 REF
10 SOUT
9 CRext
8 HCK2
7 HCK1
6 PSIG
5 G
4 R
3 B
2 RGT
1 TEST2
LCD901
2.5INCH
LCD UNIT
CN5702 12P
1 XVC_SCK
2 XCS_LCD_DA
3 VC_SO
4 REG_GND
5 PANEL_XVD
6 C-SYNC/XHD
7 PANEL_HOLD
8 REG_GND
9 PANEL_B
10 PANEL_G
11 PANEL_R
12 AD6
CF-69 BOARD
CN004
THROUGH THE
CP-82 HARNESS
(SEE PAGE 4-64)
★R5553
22k:TYPE SO 61k
33k:TYPE SO 123k
★R5505
27uH:TYPE SO 61k
6.8uH:TYPE SO 123k
DAC
REG_GND
PWM
LED
DETIN
AD6
PD-133 BOARD (2/2)
05

When the machine needs to be repaired, please refer to page 2 (this service manual) to discriminate the type of LCD.

SIGNAL PATH

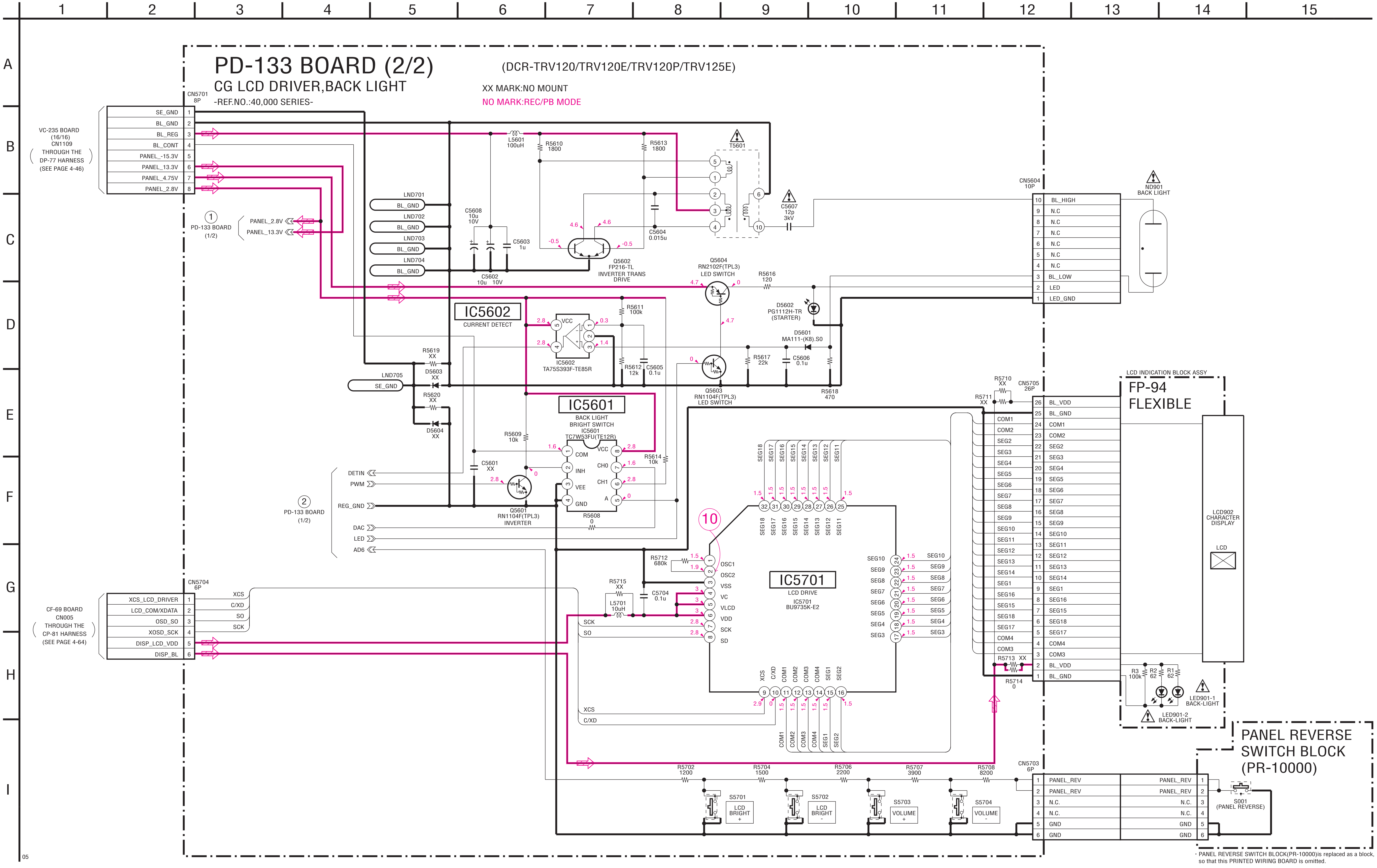
	VIDEO SIGNAL CHROMA
REC	➡
PB	⇨

★ MARKED:MOUNTED TABLE

Different types of IC5501 have different parts mounted.

IC TYPE / Ref.No.	RB5P004AM1	CXA3579R-T4
C5527	0.01u	XX
IC5501	RB5P004AM1	CXA3579R-T4
R5505	15k	XX
R5591	100k	180k
R5592	100k	33k
R5593	100k	33k
R5594	100k	33k

PR-10000 (PANEL REVERSE SWITCH BLOCK), PD-133 (CG LCD DRIVER, BACK LIGHT) SCHEMATIC DIAGRAM • See page 3 for PD-133 printed wiring board. • See page 9 for waveforms.

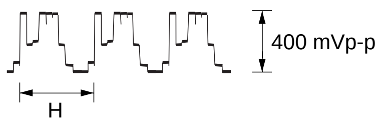

PD-133 BOARD (2/2)
CG LCD DRIVER,BACK LIGHT
-REF.NO.:40,000 SERIES-
(DCR-TRV120/TRV120E/TRV120P/TRV125E)
XX MARK:NO MOUNT
NO MARK:REC/PB MODE
CN5701 8P
SE_GND
BL_GND
BL_REG
BL_CONT
PANEL_-15.3V
PANEL_13.3V
PANEL_4.75V
PANEL_2.8V
VC-235 BOARD (16/16) CN1109 THROUGH THE DP-77 HARNESS (SEE PAGE 4-46)
PD-133 BOARD (1/2)
L5601 100uH
R5610 1800
R5613 1800
T5601
C5607 12p 3kV
C5604 0.015u
C5608 10u 10V
C5603 1u
C5602 10u 10V
Q5602 FP216-TL INVERTER TRANS DRIVE
Q5604 RN2102F(TPL3) LED SWITCH
R5616 120
D5602 PG1112H-TR (STARTER)
D5601 MA111-(K8).S0
IC5602 CURRENT DETECT
IC5602 TA75S393F-TE85R
R5611 100k
R5612 12k
C5605 0.1u
Q5603 RN1104F(TPL3) LED SWITCH
R5617 22k
C5606 0.1u
R5618 470
CN5604 10P
BL_HIGH
N.C
BL_LOW
LED
LED_GND
ND901 BACK LIGHT
R5619 XX
D5603 XX
R5620 XX
D5604 XX
LND701
LND702
LND703
LND704
LND705
IC5601 BACK LIGHT BRIGHT SWITCH
IC5601 TC7W53FU(TE12R)
R5609 10k
R5614 10k
C5601 XX
Q5601 RN1104F(TPL3) INVERTER
R5608 0
DETIN
PWM
REG_GND
DAC
LED
AD6
CN5704 6P
XCS_LCD_DRIVER
LCD_COM/XDATA
OSD_SO
XOSD_SCK
DISP_LCD_VDD
DISP_BL
CF-69 BOARD CN005 THROUGH THE CP-81 HARNESS (SEE PAGE 4-64)
R5712 680k
R5715 XX
L5701 10uH
C5704 0.1u
IC5701 LCD DRIVE
IC5701 BU9735K-E2
R5710 XX
R5711 XX
CN5705 26P
R5713 XX
R5714 0
LCD INDICATION BLOCK ASSY
FP-94 FLEXIBLE
LCD902 CHARACTER DISPLAY
LED901-1 BACK-LIGHT
LED901-2 BACK-LIGHT
R3 100k
R2 62
R1 62
R5702 1200
R5704 1500
R5706 2200
R5707 3900
R5708 8200
S5701 LCD BRIGHT +
S5702 LCD BRIGHT -
S5703 VOLUME +
S5704 VOLUME -
CN5703 6P
PANEL_REV
N.C.
GND
PANEL REVERSE SWITCH BLOCK (PR-10000)
S001 (PANEL REVERSE)
· PANEL REVERSE SWITCH BLOCK(PR-10000)is replaced as a block, so that this PRINTED WIRING BOARD is omitted.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

4-3. WAVEFORMS

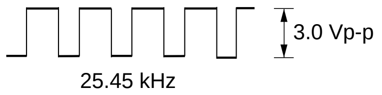
PD-133 BOARD

❶



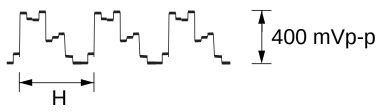
IC5501 ㊽ REC/PB

❿



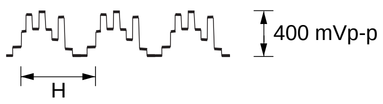
IC5701 ② REC/PB

❷



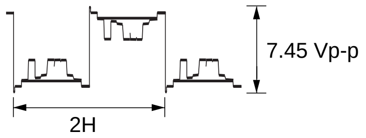
IC5501 ㊼ REC/PB

❸



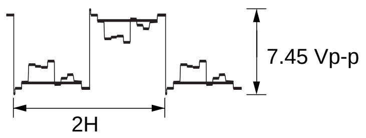
IC5501 ㊻ REC/PB

❹



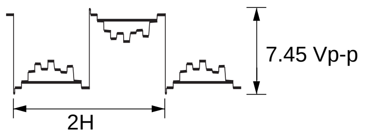
IC5501 ⑳ REC/PB

❺



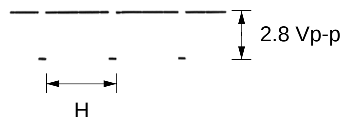
IC5501 ㉒ REC/PB

❻



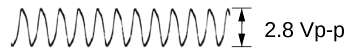
IC5501 ㉔ REC/PB

❼



IC5502 ① REC/PB

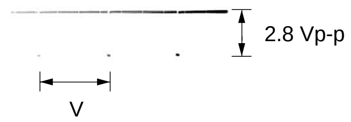
❽



5.8 MHz :TYPE SO 61k
11.7 MHz :TYPE SO 123k

IC5502 ㉖ REC/PB

❾



IC5502 ㊽ REC/PB

4-4. PARTS LOCATION

no mark : SIDE A
* mark : SIDE B

PD-133 BOARD

*	C5501	D-4
*	C5503	D-5
	C5504	B-4
	C5505	D-5
	C5506	D-5
	C5507	D-5
*	C5508	B-4
*	C5509	B-4
*	C5510	C-5
*	C5511	C-4
*	C5512	C-4
	C5515	B-4
	C5516	B-3
*	C5517	B-5
*	C5518	B-5
*	C5519	B-4
*	C5527	D-5
*	C5529	B-4
	C5532	C-5
*	C5533	C-4
*	C5534	A-5
	C5536	A-5
	C5537	B-5
	C5538	B-5
	C5539	B-5
*	C5540	A-5
*	C5602	C-2
	C5603	C-2
*	C5604	B-2
*	C5605	A-2
*	C5606	A-2
	C5607	A-1
*	C5608	C-2
*	C5704	C-3
	CN5501	A-5
	CN5502	B-5
	CN5604	A-1
	CN5701	D-2
	CN5702	D-5
	CN5703	D-1
	CN5704	D-3
	CN5705	C-3
	D5502	B-3
*	D5503	A-5
*	D5601	A-2
*	D5602	A-1
	FB5502	C-4
*	IC5501	C-4
	IC5502	B-4
*	IC5601	B-3
*	IC5602	A-2
*	IC5701	C-3
*	L5501	D-4
*	L5504	B-4
	L5505	B-4
	L5601	A-2
*	L5701	D-3
*	Q5501	B-4
	Q5502	C-5
	Q5503	C-5
	Q5504	A-5
	Q5505	B-5
	Q5506	B-5
*	Q5601	B-3
*	Q5602	B-2
*	Q5603	A-2
*	Q5604	A-2
*	R5501	D-5
*	R5503	D-4
*	R5504	B-4
*	R5505	C-5
*	R5506	C-4
*	R5507	C-4
*	R5508	C-4
*	R5509	C-4
*	R5510	C-4
*	R5511	C-4
	R5512	B-4
*	R5523	B-5
*	R5524	B-5
*	R5525	B-5
*	R5551	B-4
	R5553	B-5
*	R5557	C-4
*	R5560	B-4
	R5571	C-5
	R5572	C-5
	R5573	C-5
	R5574	B-5
	R5575	A-5
	R5576	B-5
	R5577	B-5
	R5578	B-5
*	R5579	A-5
	R5585	A-5
	R5586	A-5
	R5587	A-5
	R5588	A-5
	R5589	B-5
*	R5591	A-4
*	R5592	A-5
*	R5593	A-5
*	R5594	A-5
*	R5608	B-3
*	R5609	B-3
*	R5610	B-2
*	R5611	A-2
*	R5612	A-2
*	R5613	B-2
*	R5614	B-3
*	R5616	A-2
*	R5617	A-2
*	R5618	A-2
	R5702	C-5
*	R5704	B-5
*	R5706	B-5
*	R5707	D-5
*	R5708	D-5
*	R5712	C-3
*	R5714	D-4
*	S5701	A-5
*	S5702	B-5
*	S5703	C-5
*	S5704	D-5
	T5601	B-1

SECTION 5
ADJUSTMENTS

1-5. LCD SYSTEM ADJUSTMENTS (DCR-TRV120/TRV120E/TRV120P/TRV125E)

6. COM AMP Adjustment (PD-117 board) (Service manual page 5-31)

Set the common electrode drive signal level of LCD to the specified value.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ④ of CN5502 (PANEL COM)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	A7
Specified Value	NTSC model A=6.33 ± 0.05 Vp-p (TYPE S 61 k model) A=6.33 ± 0.05 Vp-p (TYPE S 123 k model) A=5.40 ± 0.05 Vp-p (TYPE C model)
	PAL model A=6.00 ± 0.05 Vp-p (TYPE S 61 k model) A=6.33 ± 0.05 Vp-p (TYPE S 123 k model) A=5.05 ± 0.05 Vp-p (TYPE C model)

Note 1: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E

Adjusting method:

1) Select page: 0, address: 01, and set data: 01.
2) Select page: D, address: A7, change the data and set the PANEL COM signal level (A) to the specified value.
3) Press the PAUSE button.
4) Select page: 0, address: 01, and set data: 00.

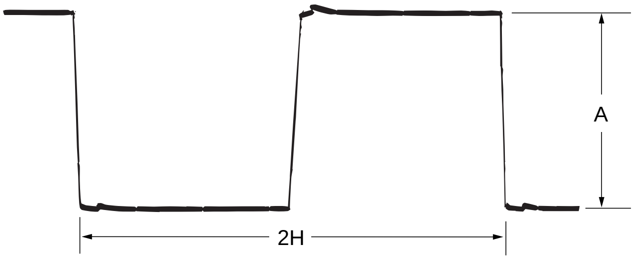


Fig. 5-1-22

1-6. LCD SYSTEM ADJUSTMENTS (TYPE SO) (DCR-TRV120/TRV120E/TRV120P/TRV125E)

Note 1: The back light (fluorescent tube) is driven by a high voltage AC power supply. Therefore, do not touch the back light holder to avoid electrical shock.

Note 2: When replacing the LCD unit, be careful to prevent damages caused by static electricity.

Note 3: Set the LCD BRIGHT to the center.
Set the LCD COLOR (Menu display) to the center.

Note 4: About PD-117 board (TYPE C or TYPE S), refer to “1-5. LCD SYSTEM ADJUSTMENTS”.

[Adjusting connector]

Most of the measuring points for adjusting the LCD display are concentrated in the following connector.
CN5502 of the PD-133 board
Connect the Measuring Instruments via the multi CPC jig (J-6082-311-A).
The following table shows the Pin No. and signal name of the connector.

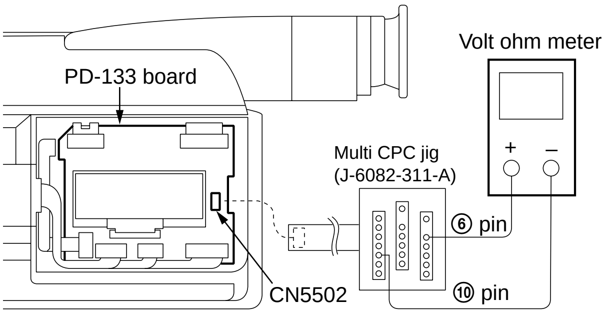
Pin No.	Signal Name	Pin No.	Signal Name
1	VB	2	XVD OUT
3	VG	4	PSIG
5	VR	6	N.C.
7	C-SYNC/XHD	8	XHD OUT
9	GND	10	GND

[LCD type check]

By measuring the resistor value between Pin ⑥ of CN5502 and Pin ⑩ of CN5502, the type of LCD can be discriminated.

PD-133 board CN5502

Resistor value	LCD type
22 kΩ	TYPE SO 61 k
33 kΩ	TYPE SO 123 k



1. LCD Initial Data Input (1)

Mode	VTR stop
Signal	Arbitrary
Adjustment Page	C
Adjustment Address	AB to BA

Adjusting method:

1) Select page: 0, address:01, and set data: 01.
2) Select page: C, and input the data in the following table.
   Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.
3) Select page: 0, address:01, and set data: 00.

Address	Data	Remark
AB	53	Fixed data
AC	00	
AD	90	
AE	CB	
AF	66	
B0	26	
B1	00	
B2	00	
B3	20	
B4	0A	
B5	24	
B6	1A	
B7	08	
B8	17	
B9	21	
BA	23	

2. LCD Initial Data Input (2)

Mode	VTR stop
Signal	Arbitrary
Adjustment Page	D
Adjustment Address	A0 to B1

Adjusting method:

1) Select page: 0, address:01, and set data: 01.
2) Select page: D, and input the data in the following table.
   Note: To write in the non-volatile memory (EEPROM), press the PAUSE button of the adjustment remote commander each time to set the data.
3) Select page: 0, address:01, and set data: 00.

Address	Data		Remark
	TYPE SO 61k	TYPE SO 123k	
A0	78	78	Fixed data
A1	95	95	
A2	80	80	VCO adj.
A3	70	70	VCO adj. (PAL model) Fixed data (NTSC model)
A4	A0	A0	V-COM adj.
A5	A0	A0	RGB AMP adj.
A6	06	06	Black Limit adj.
A7	3D	3D	Fixed data
A8	80	80	White balance adj.
A9	80	80	
AA	50	50	Contrast adj.
AB	37	37	Center Voltage adj.
AC	10	33	Fixed data
AD	10	33	
AE	9F	9F	
AF	5F	1F	
B0	FC	FC	
B1	FF	FF	

3. VCO Adjustment (PD-133 board)

Set the VCO free-run frequency. If deviated, the LCD screen will be blurred.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ⑧ of CN5502 (XHD OUT)
Measuring Instrument	Frequency counter
Adjustment Page	D
Adjustment Address	A2 (NTSC model) A2, A3 (PAL model)
Specified Value	f=15734 ± 30 Hz (NTSC model) f=15625 ± 30 Hz (PAL model)

Note 1: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E

Adjusting method (NTSC model):

Order	Page	Address	Data	Procedure
1	0	01	01	
2	D	A2		Change the data and set the VCO frequency (f) to the specified value.
3	D	A2		Press PAUSE button.
4	0	01	00	

Adjusting method (PAL model):

Order	Page	Address	Data	Procedure
1	0	01	01	
2	D	A2		Change the data and set the VCO frequency (f) to the specified value.
3	D	A2		Press PAUSE button.
4	D	A2		Read the data and this data is named D_{A2}
5				Conver D_{A2} to decimal notation, and obtain D_{A2}’ (Note 2)
6				Calculate D_{A3}’ using following equations (decimal calculation) $D_{A3}' = D_{A2}' - 16$ (TYPE SO 61k model) $D_{A3}' = D_{A2}' - 23$ (TYPE SO 123k model) If $D_{A3}' < 0$, then D_{A3} = “00”
7				Conver D_{A3}’ to a hexadecimal number, and obtain D_{A3} (Note 2)
8	D	A3	D_{A3}	Press PAUSE button.
9	0	01	00	

Note 2: Refer to table 5-4-1. “Hexadecimal-decimal conversion table”

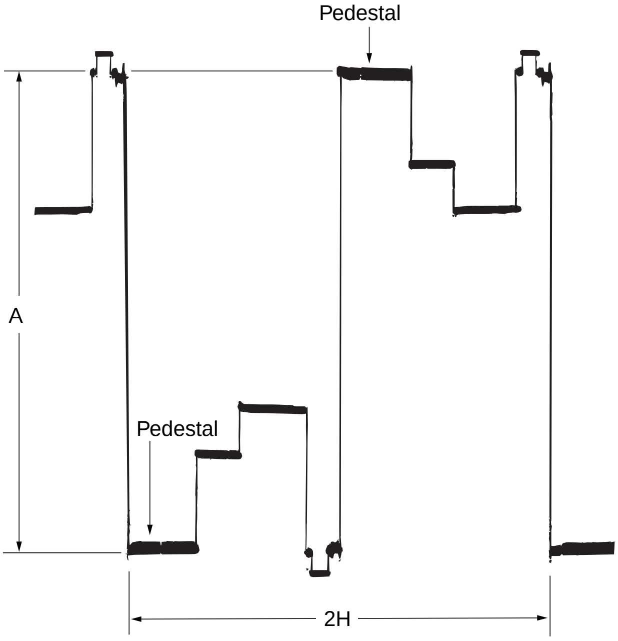
4. RGB AMP Adjustment (PD-133 board)

Set the D range of the RGB driver used to drive the LCD to the specified value. If deviated, the LCD screen will become blackish or saturated (whitish).

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ③ of CN5502 (VG) External trigger : Pin ④ of CN5502 (PSIG)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	A5
Specified Value	A=7.45 ± 0.05 Vp-p

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	
2	D	A5		Change the data and set the voltage (A) to the specified value. (The data should be “00” to “FF”)
3	D	A5		Press PAUSE button.
4	0	01	00	



A: Between the reversed waveform pedestal and non-reversed waveform pedestal

Fig. 5-1-24

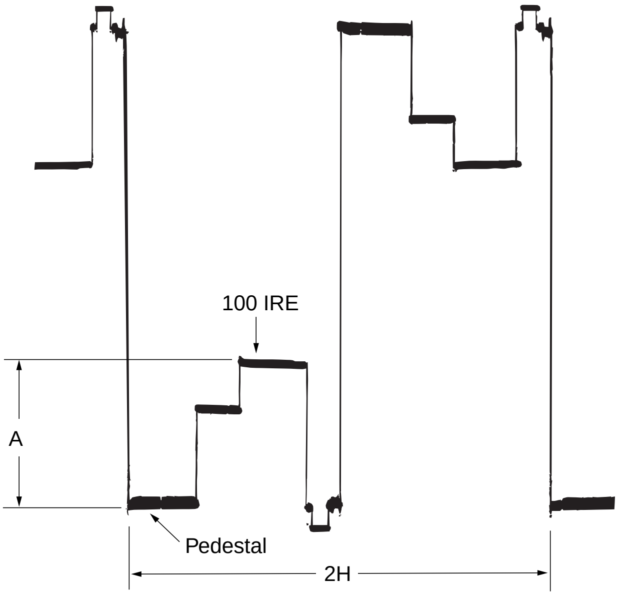
5. Contrast Adjustment (PD-133 board)

Set the level of the VIDEO signal for driving the LCD to the specified value. If deviated, the screen image will be blackish or saturated (whitish).

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ③ of CN5502 (VG) External trigger : Pin ④ of CN5502 (PSIG)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	AA
Specified Value	A=2.63 ± 0.07 Vp-p

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	
2	D	AA		Change the data and set the voltage (A) to the specified value. (The data should be “00” to “7F”)
3	D	AA		Press PAUSE button.
4	0	01	00	



A: Between the pedestal (0 IRE) and 100 IRE

Fig. 5-1-25

6. Black Limit Adjustment (PD-133 board)

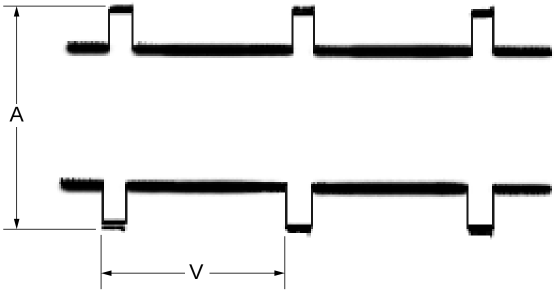
Set the common electrode drive signal level of LCD to the specified value.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ④ of CN5502 (PSIG)
Measuring Instrument	Oscilloscope
Adjustment Page	D
Adjustment Address	A6
Specified Value	A=8.15 ± 0.08 Vp-p

Note: NTSC model: DCR-TRV120/TRV120P
PAL model: DCR-TRV120E/TRV125E

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	
2	2	0E	61	
3	2	0F		Set the following data 5B (NTSC), 53 (PAL)
4	D	A6		Change the data and set the voltage (A) to the specified value. (The data should be “00” to “0F”)
5	D	A6		Press PAUSE button.
6	2	0E	00	
7	2	0F	00	
8	0	01	00	



A: PSIG signal amplitude

Fig. 5-3-26

7. Center Voltage Adjustment (PD-133 board)

Set the common electrode drive signal level of LCD to the specified value.

Mode	Camera
Subject	Arbitrary
Measurement Point	Pin ③ of CN5502 (VG)
Measuring Instrument	Digital voltmeter
Adjustment Page	D
Adjustment Address	AB
Specified Value	A=7.00 ± 0.03 Vp-p

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	
2	D	AB		Change the data and set the DC voltage (A) to the specified value. (The data should be “00” to “7F”)
3	D	AB		Press PAUSE button.
4	0	01	00	

8. V-COM Adjustment (PD-133 board)

Set the DC bias of the common electrode drive signal of LCD to the specified value.
If deviated, the LCD display will move, producing flicker and conspicuous vertical lines.

Mode	Camera
Subject	Arbitrary
Measurement Point	Check on LCD display
Measuring Instrument	
Adjustment Page	D
Adjustment Address	A4

Note: Perform “RGB AMP Adjustment”, “Contrast Adjustment”, “Black Limit Adjustment” and “Center Voltage Adjustment” before this adjustments.

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	
2	D	A4		Change the data so that brightness of the section A and section B is equal. (The data should be “80” to “BF”)
3	D	A4		Subtract 2 from the data.
4	D	A4		Press PAUSE button.
5	0	01	00	

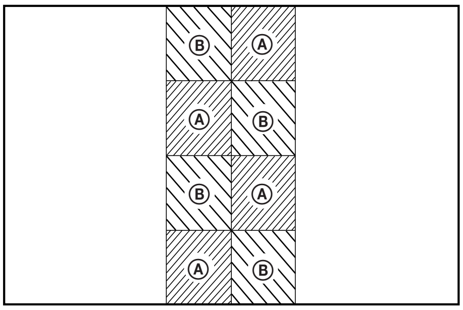


Fig. 5-1-27

9. White Balance Adjustment (PD-133 board)

Correct the white balance.
If deviated, the LCD screen color cannot be reproduced.

Mode	Camera
Subject	Arbitrary
Measurement Point	Check on LCD display
Measuring Instrument	
Adjustment Page	D
Adjustment Address	A8, A9
Specified Value	The LCD screen should not be colored.

Note 1: Check the white balance only when replacing the following parts. If necessary, adjust them.
1. LCD panel
2. Light induction plate
3. IC5501

Adjusting method:

Order	Page	Address	Data	Procedure
1	0	01	01	
2	D	A8 A9	80 80	Press PAUSE button. (Initial value)
3				Check that the LCD screen is not colored. If not colored, proceed to Step 5.
4	D	A8 A9		Change the data so that the LCD screen is not colored. (Note 2)
5	0	01	00	

Note 2: To write in the non-volatile memory (EEPROM), press the PAUSE button each time to set the data.

SECTION 6
REPAIR PARTS LIST

6-1. EXPLODED VIEWS

☞ : **Points added portion.**
☛ : **Points changed portion.**

6-1-5. LCD ASSEMBLY SECTION (TRV120/TRV120E/TRV120P/TRV125E) (Service manual page 6-5)

Former Type				New Type			
Ref. No.	Part No.	Description	Remark	Ref. No.	Part No.	Description	Remark
213	A-7074-272-A	PD-117 (TYPE S 61K) BOARD, COMPLETE	(TRV120/TRV120P)	213	A-7074-272-A	PD-117 BOARD, COMPLETE	(TYPE S 61K) (Note) ☛
213	A-7074-280-A	PD-117 (TYPE S 123K) BOARD, COMPLETE	(TRV120E: AEP, UK, EE, NE, RU/TRV125E)	213	A-7074-280-A	PD-117 BOARD, COMPLETE	(TYPE S 123K) (Note) ☛
213	A-7074-290-A	PD-117 (TYPE C) BOARD, COMPLETE	(TRV120E: E, HK, AUS, CN, JE)	213	A-7074-290-A	PD-117 BOARD, COMPLETE	(TYPE C 61K) (Note) ☛
				213	A-7074-511-A	PD-133 BOARD, COMPLETE	(TYPE SO 61K) (Note) ☞
				213	A-7074-512-A	PD-133 BOARD, COMPLETE	(TYPE SO 123K) (Note) ☞
LCD901	1-803-852-21	INDICATOR MODULE LIQUID CRYSTAL	(TYPE S 61K) (TRV120/TRV120P)	LCD901	1-803-852-21	INDICATOR MODULE, LIQUID CRYSTAL	(TYPE S 61K) (Note) ☛
LCD901	1-803-853-21	INDICATOR MODULE LIQUID CRYSTAL	(TYPE S 123K) (TRV120E: AEP, UK, EE, NE, RU/TRV125E)	LCD901	1-803-853-21	INDICATOR MODULE, LIQUID CRYSTAL	(TYPE S 123K) (Note) ☛
LCD901	1-803-859-31	INDICATOR MODULE LIQUID CRYSTAL	(TYPE C) (TRV120E: E, HK, AUS, CN, JE)	LCD901	1-803-859-31	INDICATOR MODULE, LIQUID CRYSTAL	(TYPE C 61K) (Note) ☛
				LCD901	8-753-050-60	INDICATOR MODULE LIQUID CRYSTAL	(TYPE SO 123K) (Note) ☞
				LCD901	8-753-050-65	INDICATOR MODULE LIQUID CRYSTAL	(TYPE SO 61K) (Note) ☞
⚠ND901	1-517-751-11	TUBE, FLUORESCENT, COLD CATHODE	(TRV120/TRV120E: E, HK, AUS, CN, JE/TRV120P)	⚠ND901	1-517-751-11	TUBE, FLUORESCENT, COLD CATHODE	(TYPE S 61K/C 61K/SO 123K) (Note) ☛
⚠ND901	1-517-751-21	TUBE, FLUORESCENT, COLD CATHODE	(TRV120E: AEP, UK, EE, NE, RU/TRV125E)	⚠ND901	1-517-751-21	TUBE, FLUORESCENT, COLD CATHODE	(TYPE S 123K) (Note) ☛
				⚠ND901	1-517-751-71	TUBE, FLUORESCENT, COLD CATHODE	(TYPE SO 61K) (Note) ☞

(Note) About PD-117/133 board and LCD module, discriminate LCD type on the machine referring to page 2, and replace the same type.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

PD-133

6-2. ELECTRICAL PARTS LIST

NOTE:

- Due to standardization, replacements in the parts list may be different from the parts specified in the diagrams or the components used on the set.
- -XX and -X mean standardized parts, so they may have some difference from the original one.
- RESISTORS
  All resistors are in ohms.
  METAL: Metal-film resistor.
  METAL OXIDE: Metal oxide-film resistor.
  F: nonflammable
- Items marked "*" are not stocked since they are seldom required for routine service.
  Some delay should be anticipated when ordering these items.
- SEMICONDUCTORS
  In each case, u: μ, for example:
  uA. . : μA. . uPA. . : μPA. .
  uPB. . : μPB. . uPC. . : μPC. .
  uPD. . : μPD. .
- CAPACITORS
  uF: μF
- COILS
  uH: μH

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés par une marque ⚠ sont critiquens pour la sécurité.
Ne les remplacer que par une pièce portant le numéro spécifié.

When indicating parts by reference number, please include the board.

About PD-133 board and LCD module, discriminate LCD type on the machine referring to page 2, and replace the same type.

Ref. No.	Part No.	Description			Remark
	A-7074-511-A	PD-133 BOARD, COMPLETE (TYPE SO 61K)			
	A-7074-512-A	PD-133 BOARD, COMPLETE (TYPE SO 123K)			
		************************			
					(Ref. No.: 40,000 Series)
		< CAPACITOR >			
C5501	1-127-688-21	TANTAL. CHIP	10uF	20%	6.3V
C5503	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5504	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5505	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5506	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5507	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5508	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5509	1-107-687-11	TANTAL. CHIP	3.3uF	20%	20V
C5510	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5511	1-164-739-11	CERAMIC CHIP	560PF	5%	50V
C5512	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5515	1-164-357-11	CERAMIC CHIP	0.001uF	5%	50V
C5516	1-162-926-11	CERAMIC CHIP	82PF	5%	50V
C5517	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C5518	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C5519	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C5527	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V (Note 1)
C5529	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C5532	1-125-838-11	CERAMIC CHIP	2.2uF	10%	6.3V
C5533	1-115-566-11	CERAMIC CHIP	4.7uF	10%	10V
C5534	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C5536	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5537	1-162-970-11	CERAMIC CHIP	0.01uF	10%	25V
C5538	1-163-021-91	CERAMIC CHIP	0.01uF	10%	50V
C5539	1-107-687-11	TANTAL. CHIP	3.3uF	20%	20V
C5540	1-107-725-11	CERAMIC CHIP	0.1uF	10%	16V
C5602	1-125-822-11	TANTALUM	10uF	20%	10V
C5603	1-109-982-11	CERAMIC CHIP	1uF	10%	10V
C5604	1-164-657-11	CERAMIC CHIP	0.015uF	10%	50V
C5605	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
C5606	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V
⚠C5607	1-131-959-91	CERAMIC CHIP	12PF	10%	3KV
C5608	1-125-822-11	TANTALUM	10uF	20%	10V
C5704	1-107-826-11	CERAMIC CHIP	0.1uF	10%	16V

Ref. No.	Part No.	Description		Remark
		< CONNECTOR >		
CN5501	1-573-364-11	CONNECTOR, FFC/FPC 24P		
* CN5502	1-573-984-11	CONNECTOR, BOARD TO BOARD 10P		
CN5604	1-764-709-11	CONNECTOR, FFC/FPC (LIF) 10P		
CN5701	1-779-893-11	PIN, CONNECTOR (PC BOARD) 8P		
CN5702	1-779-064-11	PIN, CONNECTOR (PC BOARD) 12P		
CN5703	1-691-344-11	CONNECTOR, FFC/FPC (ZIF) 6P		
CN5704	1-778-508-21	PIN, CONNECTOR (PC BOARD) 6P		
CN5705	1-764-532-21	CONNECTOR, FFC/FPC (ZIF) 26P		
		< DIODE >		
D5502	8-713-102-80	DIODE	1T369-01-T8A	
D5503	8-719-050-42	DIODE	RD3.3UM-T1B	
D5601	8-719-073-01	DIODE	MA111- (K8).S0	
D5602	8-719-062-44	DIODE	PG1112H-TR	
		< FERRITE BEAD >		
FB5502	1-414-760-21	FERRITE	0uH	
		< IC >		
IC5501	8-759-660-93	IC	RB5P004AM1 (Note 1)	
IC5501	8-752-100-84	IC	CXA3579R-T4 (Note 2)	
IC5502	8-752-407-33	IC	CXD3512R-T4	
IC5601	8-759-564-49	IC	TC7W53FU (TE12R)	
IC5602	8-759-075-70	IC	TA75S393F-TE85R	
IC5701	8-759-573-02	IC	BU9735K-E2	
		< COIL >		
L5501	1-469-525-91	INDUCTOR	10uH	
L5504	1-469-525-91	INDUCTOR	10uH	
L5505	1-412-956-21	INDUCTOR	27uH (TYPE SO 61K)	
L5505	1-412-949-21	INDUCTOR	6.8uH (TYPE SO 123K)	
L5601	1-419-387-21	INDUCTOR	100uH	
L5701	1-414-754-11	INDUCTOR	10uH	
		< TRANSISTOR >		
Q5501	8-729-037-52	TRANSISTOR	2SC4738F-Y/GR (TPL3)	
Q5502	8-729-427-74	TRANSISTOR	XP4601-TXE	

Note 1: This part is mounted in RB5P004AM1 type.
Note 2: This part is mounted in CXA3579R-T4 type.

Ref. No.	Part No.	Description			Remark
Q5503	8-729-427-74	TRANSISTOR	XP4601-TXE		
Q5504	8-729-042-26	TRANSISTOR	2SB1462J-QR (K8).SO		
Q5505	8-729-041-23	TRANSISTOR	NDS356AP		
Q5506	8-729-037-74	TRANSISTOR	UN9213J- (TX).SO		
Q5601	8-729-042-29	TRANSISTOR	RN1104F (TPL3)		
Q5602	8-729-039-43	TRANSISTOR	FP216-TL		
Q5603	8-729-042-29	TRANSISTOR	RN1104F (TPL3)		
Q5604	8-729-042-58	TRANSISTOR	RN2102F (TPL3)		
		< RESISTOR >			
R5501	1-216-853-11	METAL CHIP	470K	5%	1/16W
R5503	1-218-895-11	METAL CHIP	100K	0.5%	1/16W
R5504	1-216-845-11	METAL CHIP	100K	5%	1/16W
R5505	1-216-835-11	METAL CHIP	15K	5%	1/16W (Note 1)
R5506	1-216-826-11	METAL CHIP	2.7K	5%	1/16W
R5507	1-216-841-11	METAL CHIP	47K	5%	1/16W
R5508	1-216-843-11	METAL CHIP	68K	5%	1/16W
R5509	1-216-837-11	METAL CHIP	22K	5%	1/16W
R5510	1-216-843-11	METAL CHIP	68K	5%	1/16W
R5511	1-216-857-11	METAL CHIP	1M	5%	1/16W
R5512	1-216-845-11	METAL CHIP	100K	5%	1/16W
R5523	1-216-809-11	METAL CHIP	100	5%	1/16W
R5524	1-216-809-11	METAL CHIP	100	5%	1/16W
R5525	1-216-809-11	METAL CHIP	100	5%	1/16W
R5551	1-216-841-11	METAL CHIP	47K	5%	1/16W
R5553	1-216-837-11	METAL CHIP	22K	5%	1/16W (TYPE SO 61K)
R5553	1-216-839-11	METAL CHIP	33K	5%	1/16W (TYPE SO 123K)
R5557	1-216-864-11	METAL CHIP	0	5%	1/16W
R5560	1-216-853-11	METAL CHIP	470K	5%	1/16W
R5571	1-216-809-11	METAL CHIP	100	5%	1/16W
R5572	1-216-833-11	METAL CHIP	10K	5%	1/16W
R5573	1-216-833-11	METAL CHIP	10K	5%	1/16W
R5574	1-218-917-11	RES-CHIP	820K	5%	1/16W
R5575	1-216-843-11	METAL CHIP	68K	5%	1/16W
R5576	1-216-857-11	METAL CHIP	1M	5%	1/16W
R5577	1-216-853-11	METAL CHIP	470K	5%	1/16W
R5578	1-216-864-11	METAL CHIP	0	5%	1/16W
R5579	1-216-847-11	METAL CHIP	150K	5%	1/16W
R5585	1-216-864-11	METAL CHIP	0	5%	1/16W
R5586	1-216-864-11	METAL CHIP	0	5%	1/16W
R5587	1-216-864-11	METAL CHIP	0	5%	1/16W
R5588	1-216-864-11	METAL CHIP	0	5%	1/16W
R5589	1-216-864-11	METAL CHIP	0	5%	1/16W
R5591	1-216-845-11	METAL CHIP	100K	5%	1/16W (Note 1)
R5591	1-216-848-11	METAL CHIP	180K	5%	1/16W (Note 2)
R5592	1-216-845-11	METAL CHIP	100K	5%	1/16W (Note 1)
R5592	1-216-839-11	METAL CHIP	33K	5%	1/16W (Note 2)
R5593	1-216-845-11	METAL CHIP	100K	5%	1/16W (Note 1)
R5593	1-216-839-11	METAL CHIP	33K	5%	1/16W (Note 2)
R5594	1-216-845-11	METAL CHIP	100K	5%	1/16W (Note 1)
R5594	1-216-839-11	METAL CHIP	33K	5%	1/16W (Note 2)
R5608	1-216-864-11	METAL CHIP	0	5%	1/16W
R5609	1-216-833-11	METAL CHIP	10K	5%	1/16W
R5610	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R5611	1-216-845-11	METAL CHIP	100K	5%	1/16W
R5612	1-216-834-11	METAL CHIP	12K	5%	1/16W
R5613	1-216-055-00	METAL CHIP	1.8K	5%	1/10W
R5614	1-216-833-11	METAL CHIP	10K	5%	1/16W
R5616	1-216-810-11	METAL CHIP	120	5%	1/16W
R5617	1-216-837-11	METAL CHIP	22K	5%	1/16W
R5618	1-216-817-11	METAL CHIP	470	5%	1/16W
R5702	1-216-822-11	METAL CHIP	1.2K	5%	1/16W
R5704	1-216-823-11	METAL CHIP	1.5K	5%	1/16W
R5706	1-216-825-11	METAL CHIP	2.2K	5%	1/16W
R5707	1-216-828-11	METAL CHIP	3.9K	5%	1/16W
R5708	1-216-832-11	METAL CHIP	8.2K	5%	1/16W
R5712	1-216-855-11	METAL CHIP	680K	5%	1/16W
R5714	1-216-864-11	METAL CHIP	0	5%	1/16W
		< SWITCH >			
S5701	1-692-088-41	SWITCH, TACTILE (LCD BRIGHT +)			
S5702	1-692-088-41	SWITCH, TACTILE (LCD BRIGHT -)			
S5703	1-692-088-41	SWITCH, TACTILE (VOLUME +)			
S5704	1-692-088-41	SWITCH, TACTILE (VOLUME -)			
		< TRANSFORMER >			
⚠T5601	1-435-226-11	TRANSFORMER, INVERTER			

Note 1: This part is mounted in RB5P004AM1 type.
Note 2: This part is mounted in CXA3579R-T4 type.

The components identified by mark ⚠ or dotted line with mark ⚠ are critical for safety. Replace only with part number specified.	Les composants identifiés par une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

DCR-TRV120/TRV120E/TRV120P/TRV125E/
TR8000E/TR8100E

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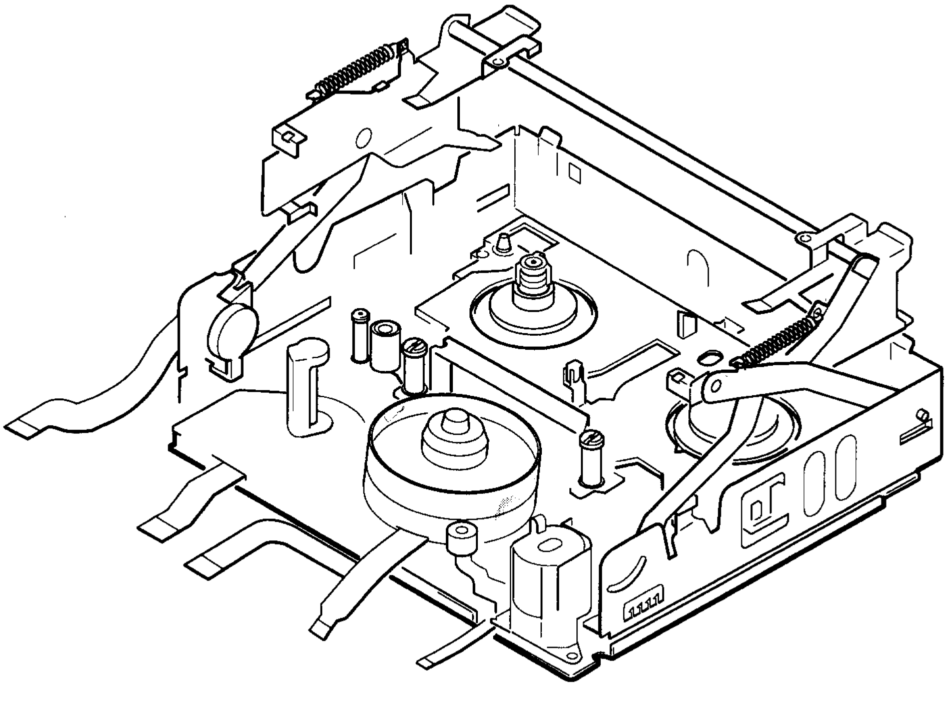
8mm Video MECHANICAL ADJUSTMENT MANUAL VII

B MECHANISM

Video8

Use this mechanical adjustment manual VII together with
the service manual of the respective models.



8 MECHANISM DECK

SONY®

MICROFILM

MC-Service

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For the mode selector operation, schematic diagram and parts list, refer to the Supplement-1 Manual.

1. PREPARATION FOR CHECKING, ADJUSTING AND REPLACING THE MECHANISM

For the disassembly procedures of the cabinet and printed wiring boards, please refer to the "DISASSEMBLY" section of the service manual of the respective models.

To re-assemble the mechanical parts which are disassembled in the following sections, perform the disassembly steps in reverse, unless otherwise specified.

The mechanisms are adjusted while set in the USE mode of operation. (Refer to the "Mode Selector Operation Procedure of the Supplement-1 Manual for how to enter the USE mode.)

1-1. Cassette Compartment Block Assy

1. Disassembly Procedure (Refer to Fig. 1.)

1) Set the mechanism to USE mode.
2) Confirm that the Cassette Compartment Block Assy is opened. If it is not opened, open it referring to Fig. a.
3) Remove the claws Ⓐ and Ⓑ of the Damper Assy ① from the chassis.
4) Remove the washer ② from the shaft of the Cassette Compartment near the Drum, next to the loading motor. Remove the shaft of the arm from the slot.
5) Remove the shaft of the arm from the slot Ⓒ of the Cassette Compartment near the Drum, next to the capstan motor. (Refer to Fig. b)
6) Lift up the Cassette Compartment at the Drum side in the direction of the arrow Ⓓ, and remove the arm shaft of the Cassette Compartment from the LS Chassis ④ near the Reel Tables. Remove the Cassette Compartment Assy ③ in the direction of the arrow Ⓔ.

2. Precautions During Re-Assembling

1) After attaching the Tension Spring, confirm that the straight portion at the end of the curved hook of the spring is positioned inside the mechanism. (Refer to Fig. c)
2) Confirm that the claw in the bottom of the shaft near the Reel Table of the Cassette Compartment is hooked to the LS Chassis.
3) Confirm that the claw of the Damper Assy is hooked to the LS Chassis. (Refer to Fig. b)

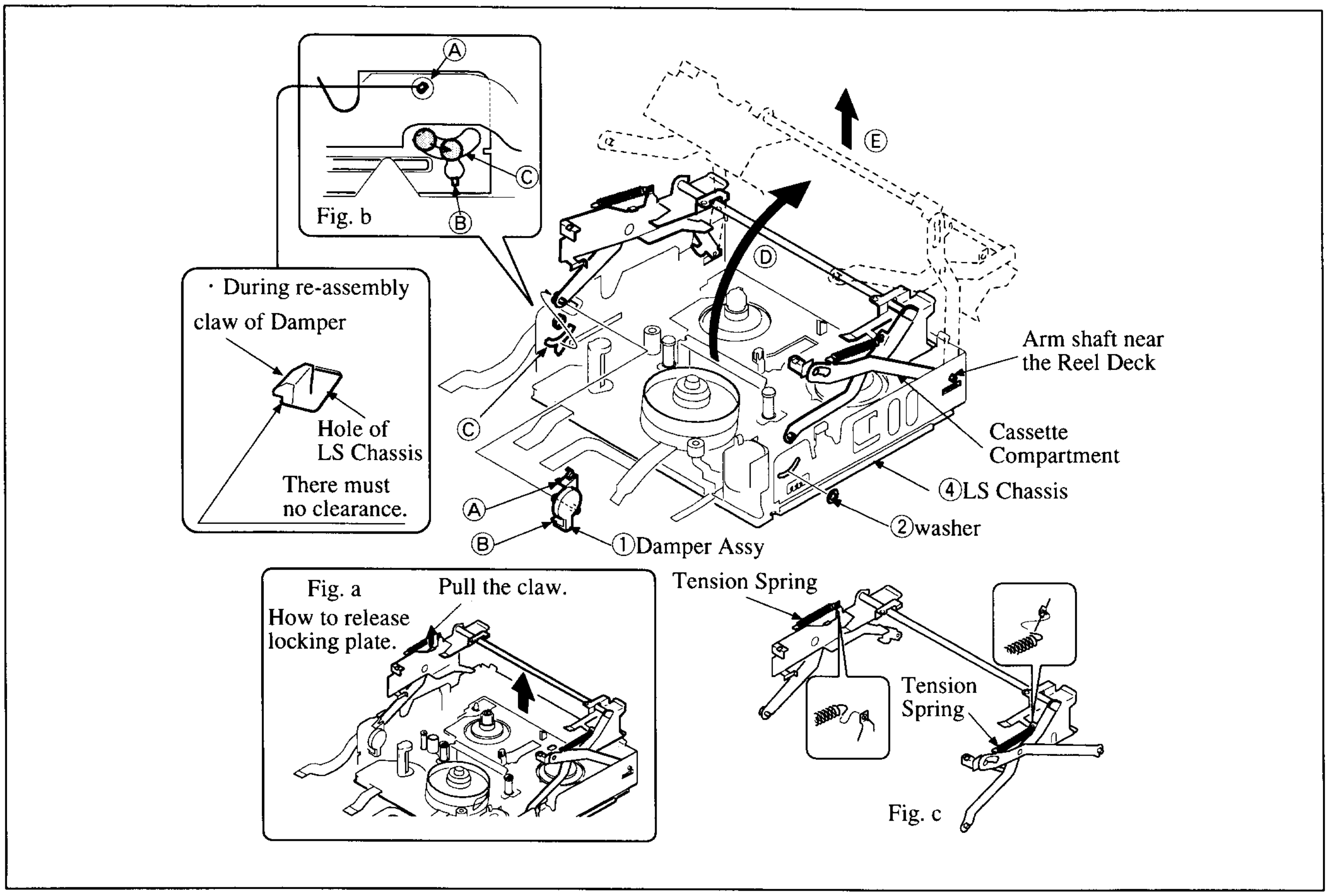

Ⓐ
Ⓒ
Fig. b
Ⓑ
· During re-assembly
claw of Damper
Hole of
LS Chassis
There must
no clearance.
Ⓔ
Ⓓ
Arm shaft near
the Reel Deck
Ⓒ
Cassette
Compartment
④LS Chassis
②washer
Ⓐ
Ⓑ
①Damper Assy
Fig. a
Pull the claw.
How to release
locking plate.
Tension Spring
Tension
Spring
Fig. c

Fig. 1

1-2. How to Operate the Mechanism with the Cassette Compartment Block Assy Removed

1. How to load a cassette tape (Refer to Fig. 2):

1) While referring to section "DISASSEMBLY" of the respective service manual, turn the main power on with the cabinet and camera section removed. (It enables to operate the mechanical deck.)
2) Connect the adjustment remote commander (Ref. No. J-10) and establish the TEST mode.

> Example of establishing the TEST mode: model CCD-TR420E/TR440E.
> Select page: 6, address: 00, set data :01 and press the PAUSE button to release protection.
> Select page: 7, address: 01, set data: 01 and press the PAUSE button.
> After tape loading or other desired operations of mechanism are completed, be sure to perform the following:
> Select page: F, address: 01, set data :00 and press the PAUSE button.
> Select page: 6, address: 00, set data: 00 and press the PAUSE button.

3) Press the push-switch ① knob in the direction of the arrow which sets the machine into loading mode.

☆ PB, FF/REW and CUE/REV operations are possible.

2. How to establish RECORD mode:

1) Press pin of the push-switch ② (ON state) and keep the ON state by fixing with adhesive tape ③.
2) Turn the main power switch ON (select VTR or CAMERA position of in case of camera).
3) Set the RECORD switch to ON.
   (When the TEST mode is selected, the rotation detection of the S and T reel tables is muted, and the top end sensor is disable which allow to run the tape.)

3. How to eject a cassette tape:

1) Press the EJECT switch to ON.

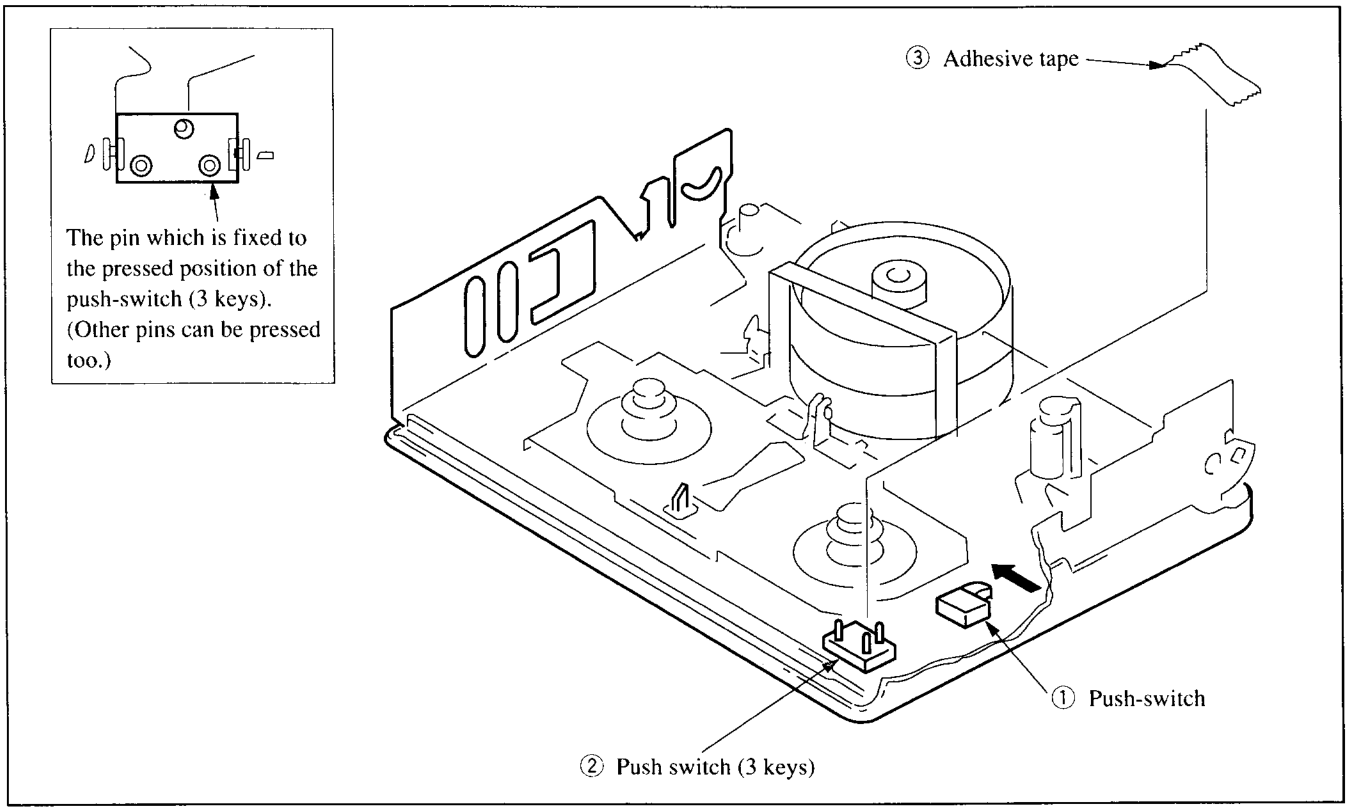

The pin which is fixed to the pressed position of the push-switch (3 keys). (Other pins can be pressed too.)
③ Adhesive tape
① Push-switch
② Push switch (3 keys)

Fig. 2

2. PERIODIC CHECK AND MAINTENANCE ITEMS

- Perform the following periodic check and maintenance to ensure that the machine functions continue to operate in peak condition, and to protect the tape and mechanism deck. After completing repair work, perform the following maintenance items regardless of how long the user's machine has been used.

2-1. Rotary Drum Assy Cleaning

Press the cleaning piece (Ref. No. J-2) moistened with cleaning fluid (Ref. No. J-1) lightly on the Rotary Drum Assy. Gently turn the Rotary Drum Assy slowly by hand counter-clockwise to clean the rotary drum.

Caution: Never attempt to turn the head drum motor by turning the main power ON. Also, never turn the drum clockwise by hand. In addition, never move the cleaning piece vertically with respect to the head tips, since this will damage them. Never clean the head drum in any way other than as described above.

2-2. Tape Path Cleaning (Refer to Fig. 3.)

1) Set the mechanism to USE mode. Clean the tape path system (TG-1, TG-2, TG-3, TG-4, pinch roller, capstan shaft) and lower drum using a very thin cotton swab (Ref. No. J-3) moistened with cleaning fluid.

Caution: Take care that the very thin cotton swab (Ref. No. J-3) does not touch the oil or grease of the various link mechanisms.

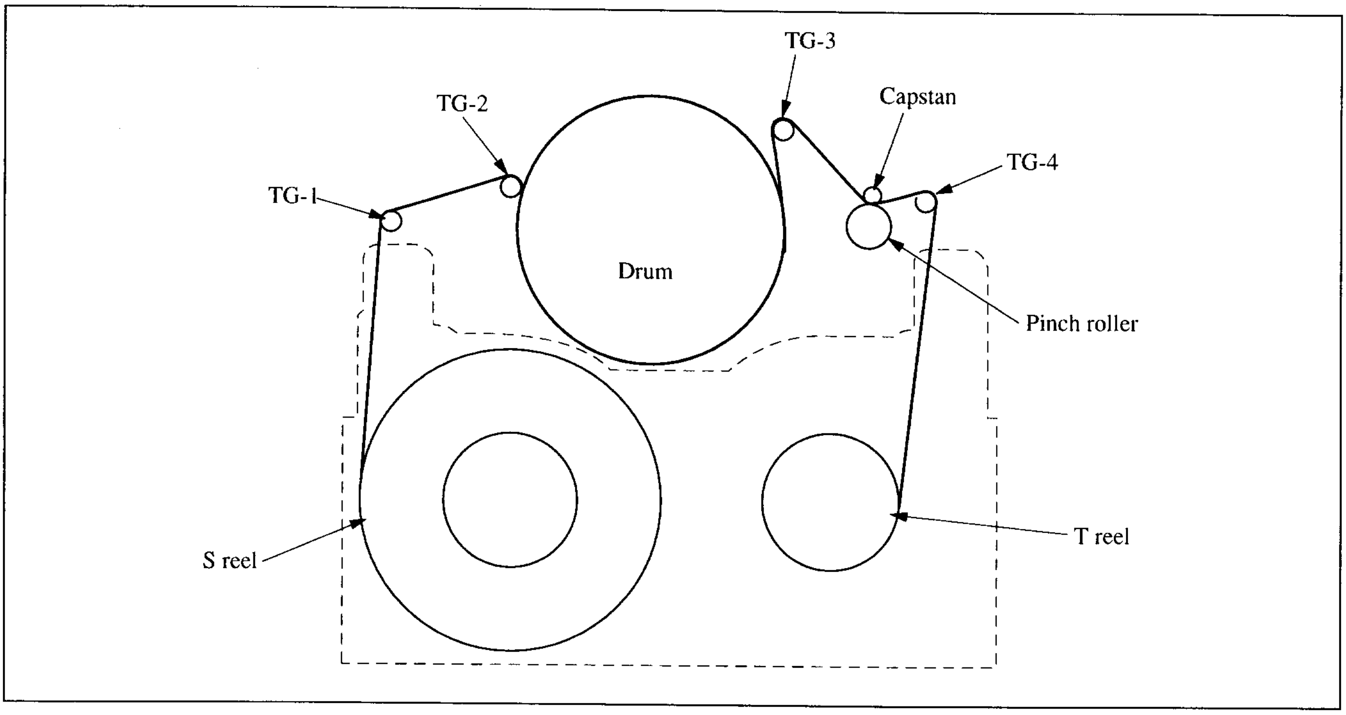


Fig. 3

2-3. Periodic Check Items

Maintenance and Inspection Points		Operating Hours										Remarks
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
	Cleaning of tape running surface	○	○	○	○	○	○	○	○	○	○	Take care not to get oily.
	Cleaning and degaussing of Rotary Drum Assy	○	○	○	○	○	○	○	○	○	○	Take care not to get oily.
Drive System	Timing Belt	—	☆	—	☆	—	☆	—	☆	—	☆	3-965-546-01
	Capstan Shaft	—	◎	—	◎	—	◎	—	◎	—	◎	Take great care not to let any oil contact the tape running surface.
	Change Gear Shaft Relay Pulley Shaft	—	◎	—	◎	—	◎	—	◎	—	◎	
	Loading Motor	—	☆	—	☆	—	☆	—	☆	—	☆	X-3945-401-1
Performance Check	Abnormal Sound	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Tape Hold-back Tension Measurement	—	☆	—	☆	—	☆	—	☆	—	☆	
	Brake System	—	☆	—	☆	—	☆	—	☆	—	☆	
	FWD RVS } Torque Measurement	—	☆	—	☆	—	☆	—	☆	—	☆	

○Cleaning ◎Lubrication ☆Check

Note: When overhauling the machine, replace the parts while referring to the above table.

Note: Regarding oil

- Be sure to use the specified oil. (If the viscosity and other characteristics are different, various troubles may arise.)
  Oil: Sony part No. 7-661-018-18
  (Mitsubishi diamond oil hydro fluid NT-68)
- For the oil lubricated bearings, use oil free from dust or foreign materials. If the oil contains any dust or foreign material, the bearings will wear out quickly or burn out.
- One drop of oil is the amount of oil which forms at the tip of a stick of 2 mm diameter.

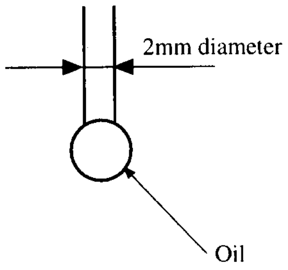


Fig. 4

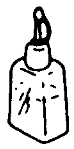
2-4. Service Tool List

Ref. No.	Name	Parts Code	Tool Stamp	Applications
J-1	Cleaning fluid	Y-2031-001-0	——	
J-2	Cleaning piece	2-034-697-00	——	
J-3	Very thin cotton swab (made by Nippon Cotton Swab Inc. (P752D))		——	
J-4	Head demagnetizer	Commercially available	——	
J-5	Dental mirror Spare mirror	J-6080-029-A J-6080-030-1	SL-5052	Tape path
J-6	Alignment tape (NTSC : WR5-1NP) (PAL : WR5-1CP)	8-967-995-02 8-967-995-07	——	Tape path
J-7	FWD/RVS take-up torque cassette	J-6080-824A	GD-2086	
J-8	Screwdriver for tape path adjustment	J-6082-026-A	——	For tape guide adjustment
J-9	FWD/BACK tension adjustment screwdriver	J-6082-187-A	——	
J-10	Remote commander for adjustment	J-6082-053-B	——	Tape path (Setting PATH mode)
J-11	MD process table	J-6082-166-A	——	
J-12	FLOIL Grease SG-941	7-662-001-39	——	
J-13	FLOIL Grease SG-055G	7-651-000-09	——	

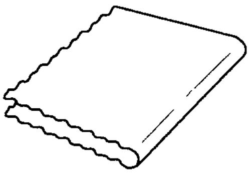
Other equipment

- Oscilloscope
- Analog circuit tester (input impedance 20 kΩ)

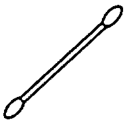
J-1



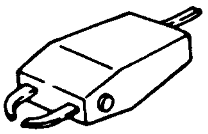
J-2



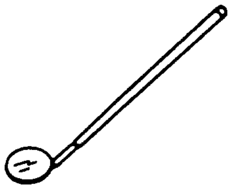
J-3



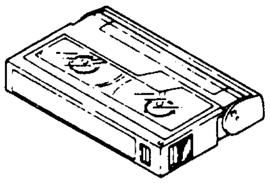
J-4



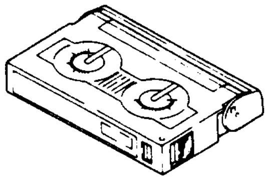
J-5



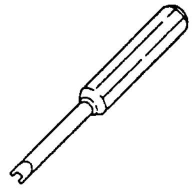
J-6



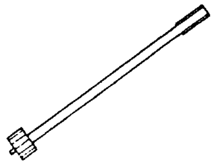
J-7



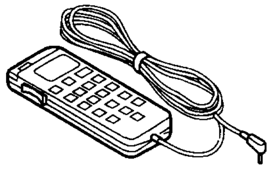
J-8



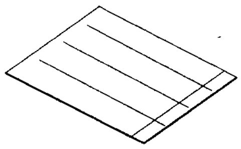
J-9



J-10



J-11



J-12

J-13

7-651-000-09
SG-055G

3. CHECKING, ADJUSTING AND REPLACING THE MECHANISM

3-1. HC Roller Block Assy (Refer to Fig. 5)

1. Disassembly Procedure

1) Remove the Torsion Spring ① from the cut-out Ⓐ of the motor holder. Hook it to the claw Ⓑ of the HC Arm.
2) Remove the HC Roller Block Assy in the direction shown by Ⓒ.
3) Remove the stop washer ② and remove the HC Roller Block Assy ③.

2. Precautions During Re-Assembly

1) After attaching the HC Roller Block Assy, confirm that both ends of the torsion spring are hooked to Ⓐ and Ⓓ.
2) Align the block so that the cut-out Ⓔ agrees with the rib Ⓕ.

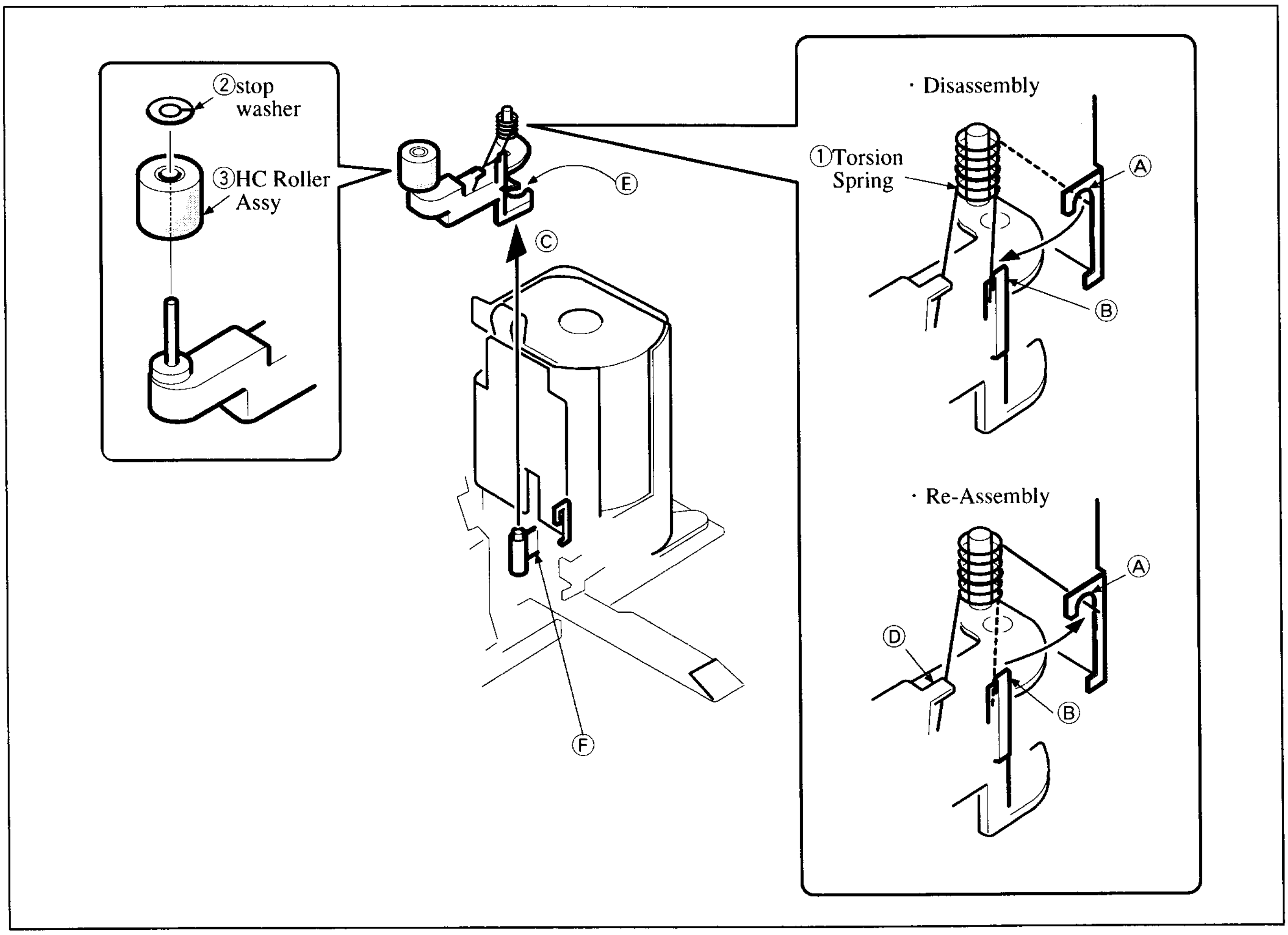

②stop washer
③HC Roller Assy
Ⓔ
Ⓒ
Ⓕ
· Disassembly
①Torsion Spring
Ⓐ
Ⓑ
· Re-Assembly
Ⓓ
Ⓐ
Ⓑ

Fig. 5

3-2. Drum Assy (Refer to Fig. 6)

1. Disassembly Procedure

1) Set the mechanism to $\boxed{\text{USE}}$ mode.
2) Remove the three screws (M 1.4) ① and remove the Drum Assy ②.

Caution: Be careful not to touch the outer circumference of the drum. (Hold the portions Ⓐ and Ⓑ of the drum assy.)

2. Precautions During Re-Assembly

1) Be careful not to touch the outer circumference of the drum. (Hold the portions Ⓐ and Ⓑ of the drum assy.)
2) When tightening the three screws (M 1.4), tighten them in the order Ⓒ, then Ⓓ, then Ⓔ.
3) After attaching the Drum Assy, perform the steps in section "4. TAPE PATH ADJUSTMENT".

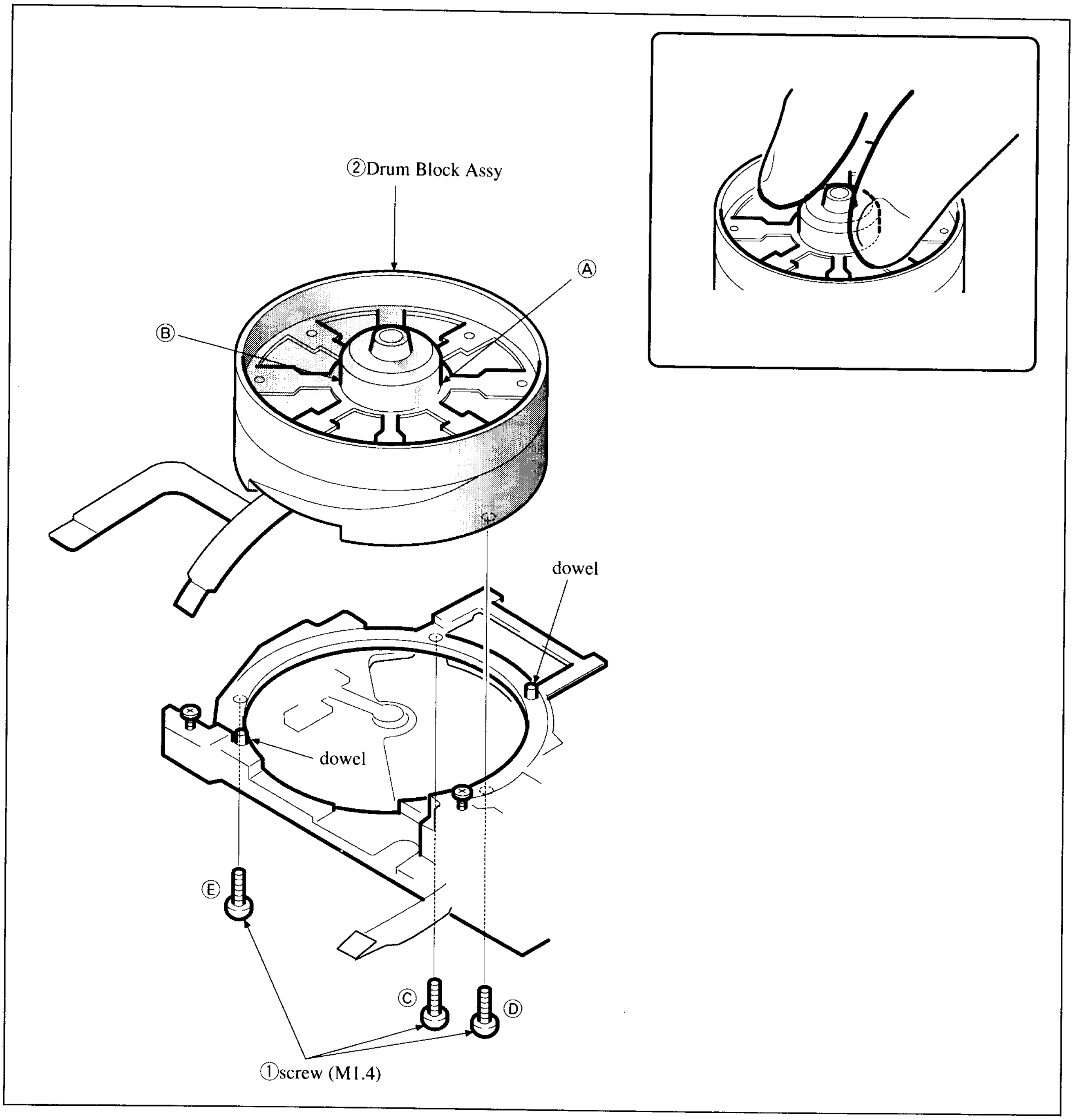


Fig. 6

3-3. Drum Base Block Assy, Shaft Ground (Refer to Fig. 7)

1. Disassembly Procedure

1) Remove the Drum Assy referring to section 3-2.
2) Remove the three screws (M 1.4×2.5) ① and remove the Drum Base Block Assy ②.
3) Remove the screw (M 1.7×1.4) ③ and remove the Shaft Ground ④.

Caution 1: Do not hold the spring portion of the Shaft Ground ④.

Caution 2: The loading motor can be removed while the mechanism is in this state. However, do not move any other mechanical parts (especially gears and cams around the rotary switch) when removing the loading motor. (Refer to 3-11.)

2. Precautions During Re-Assembly

1) Do not touch the spring portion of the Shaft Ground ④.
2) When tightening the three screws (M 1.4×2.5), tighten them in the order of Ⓐ, then Ⓑ, then Ⓒ.
3) After re-assembly is completed, perform the steps in section "4. TAPE PATH ADJUSTMENT".

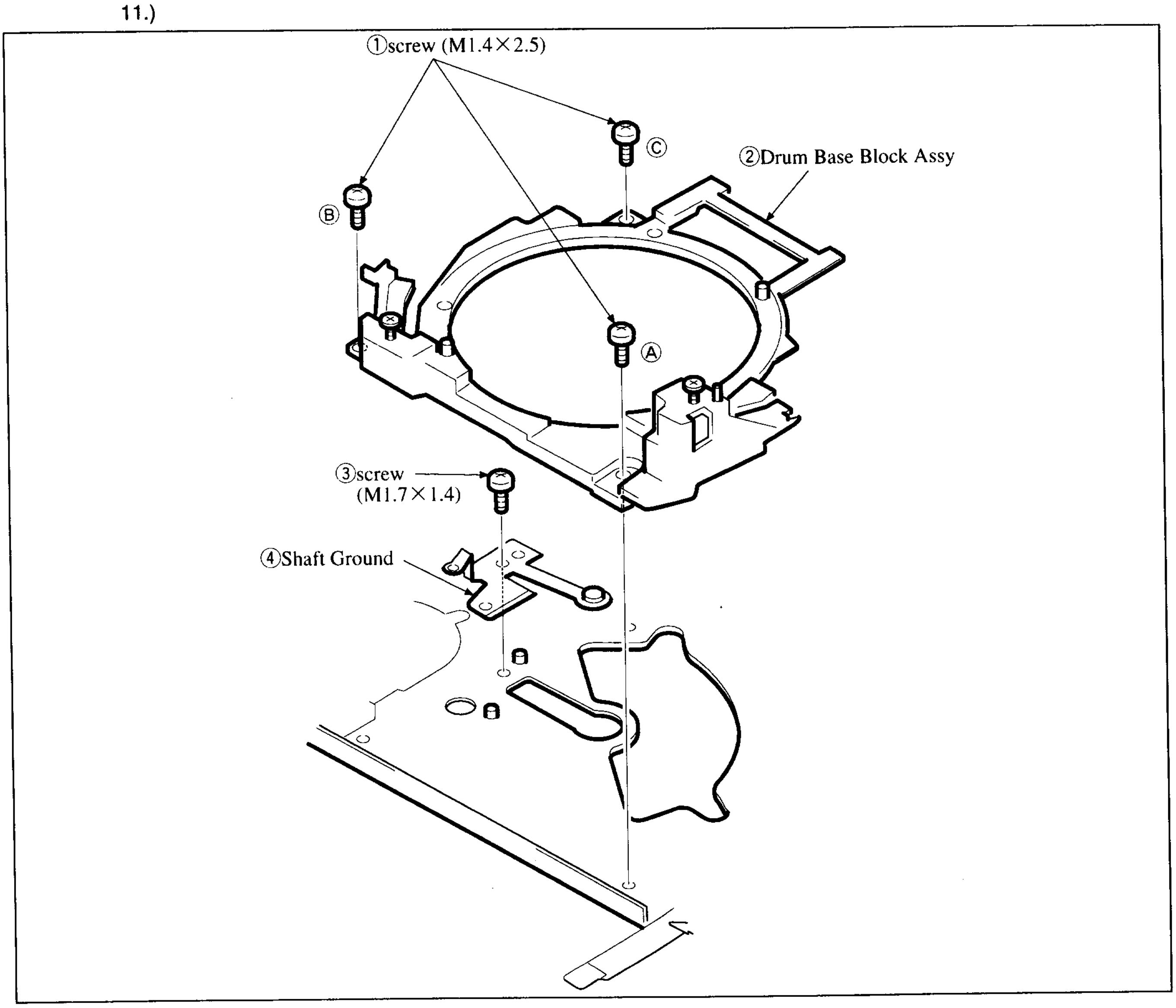


Fig. 7

3-4. Gooseneck Retainer, Gooseneck Gear Assy (Refer to Fig. 8)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the LED ① from the LED holder of the Gooseneck Retainer ③.
   (Turn the flexible board 90° outside and remove it upward.)
3) Remove the three screws (M 1.4×2.5) ② and remove the Gooseneck Retainer ③.
4) Remove the stop washer ④ and remove the Gooseneck Gear Assy ⑤.

2. Precautions During Re-Assembly

1) When attaching the Gooseneck Retainer ③, take care that the Gooseneck Retainer ③ does not collide with the tension regulator band. (The tension regulator band must be located inside.)
2) Hook the T-side claw on the guide.

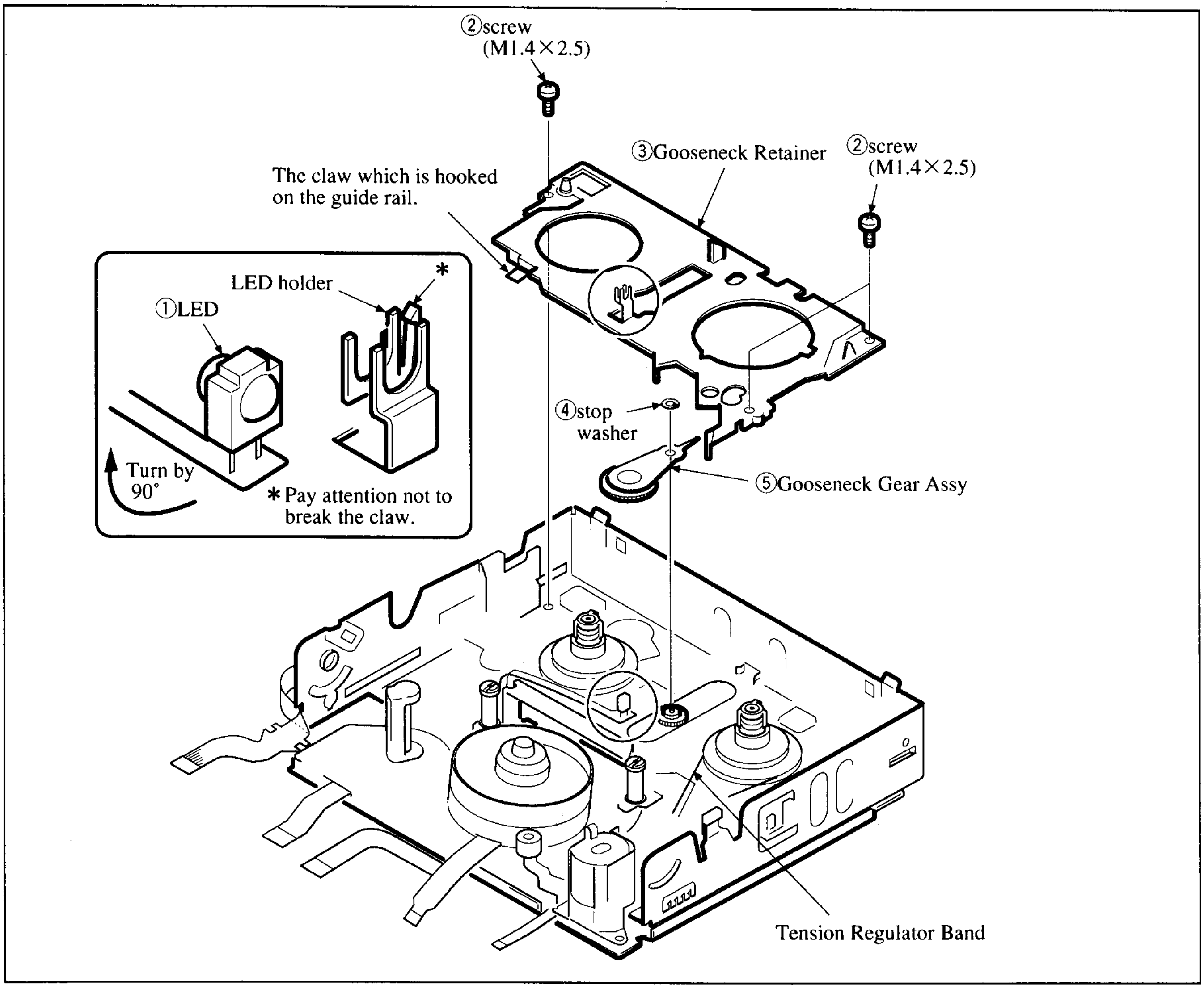

②screw
(M1.4×2.5)
③Gooseneck Retainer
②screw
(M1.4×2.5)
The claw which is hooked on the guide rail.
LED holder
*
①LED
Turn by 90°
* Pay attention not to break the claw.
④stop washer
⑤Gooseneck Gear Assy
Tension Regulator Band

Fig. 8

3-5. LS Chassis Block Assy, Mechanical Chassis Block Assy (Refer to Fig. 9)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the FP-221 flexible board ① from the flexible board holder.
4) Remove the stop ring E1.5 ②.
5) Remove the two screws (M 1.4×2.5) ③ and remove the LS Chassis Block Assy ④ from the Mechanical Chassis Block ⑤ in the direction of the arrow Ⓐ.

Note: The Tension Regulator Plate (2) can easily fall into the Mechanical Chassis Block Assy. Take care not to drop it.

2. Precautions During Re-Assembly

1) Before attaching the LS Chassis Block Assy, confirm that the respective phase-determining holes have been adjusted for correct phase. Also confirm that the specified locations of the Mechanical Chassis Block Assy and the LS Chassis Block Assy are coated with grease SG-055G (Ref. No. J-13). (Refer to Fig. a)
2) When attaching the LS Chassis Block Assy, insert the LS Cam Plate (on the LS chassis side) into the dowel (on the mechanical chassis side). Also insert the TG1 Cam Axis (on the LS chassis side) into the Tension Regulator Plate (2) (on the mechanical chassis side).
3) When attaching these block assemblies, attach them while pressing the TG-1 Arm Assy in the direction toward the TG-2 Guide. (Refer to Fig. b)
4) Pay attention that the TG-1 Arm is not floated.

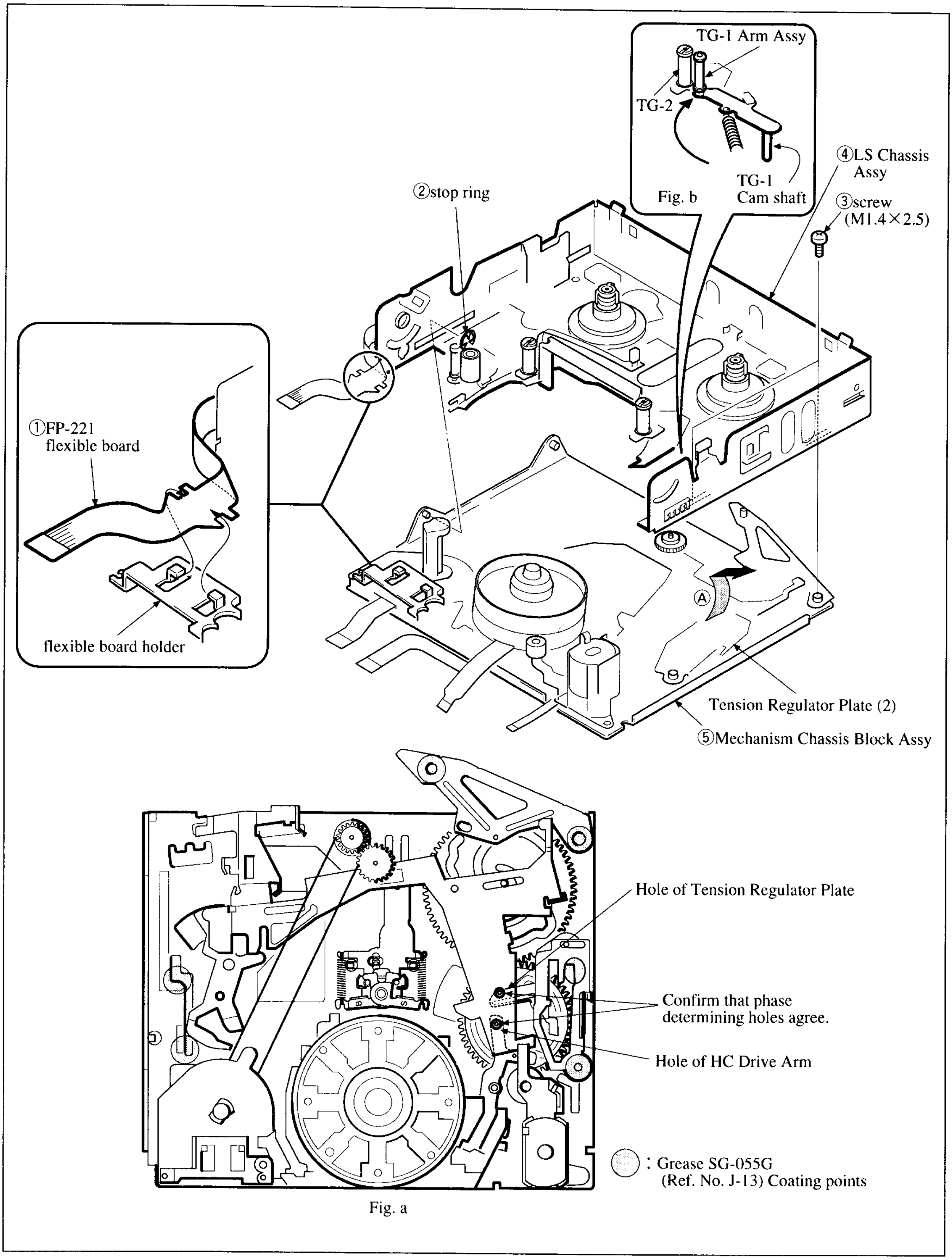

TG-1 Arm Assy
TG-2
TG-1
Cam shaft
Fig. b
④LS Chassis Assy
②stop ring
③screw (M1.4×2.5)
①FP-221 flexible board
flexible board holder
Ⓐ
Tension Regulator Plate (2)
⑤Mechanism Chassis Block Assy
Hole of Tension Regulator Plate
Confirm that phase determining holes agree.
Hole of HC Drive Arm
: Grease SG-055G (Ref. No. J-13) Coating points
Fig. a

Fig. 9

- **PARTS CONSTITUTING THE LS CHASSIS.**

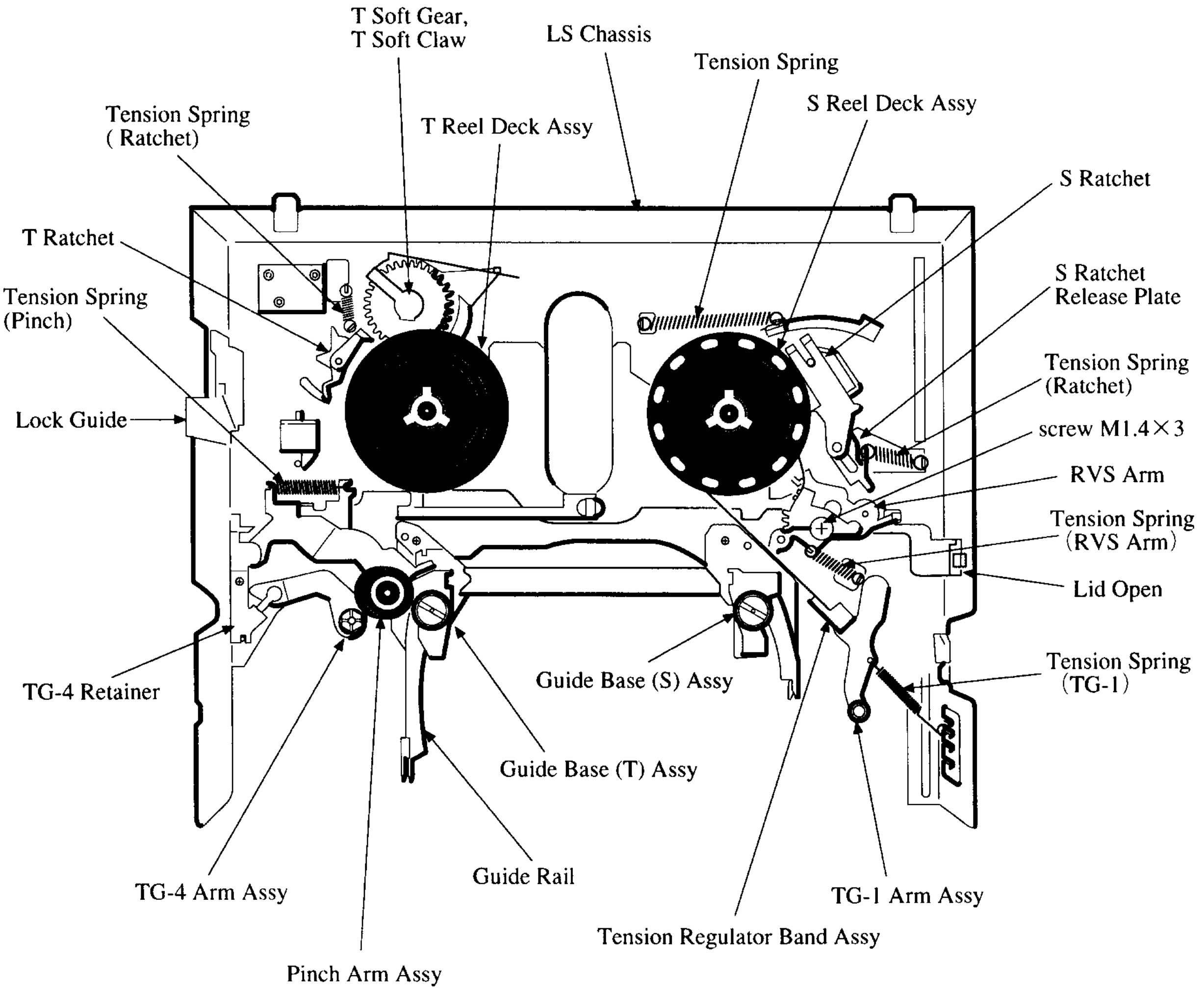

T Soft Gear,
T Soft Claw
LS Chassis
Tension Spring
Tension Spring
(Ratchet)
T Reel Deck Assy
S Reel Deck Assy
S Ratchet
T Ratchet
Tension Spring
(Pinch)
S Ratchet
Release Plate
Tension Spring
(Ratchet)
Lock Guide
screw M1.4×3
RVS Arm
Tension Spring
(RVS Arm)
Lid Open
Tension Spring
(TG-1)
TG-4 Retainer
Guide Base (S) Assy
Guide Base (T) Assy
Guide Rail
TG-4 Arm Assy
TG-1 Arm Assy
Tension Regulator Band Assy
Pinch Arm Assy

Fig. 10

3-6. T Reel Table Assy, T Ratchet, T Soft Gear Block Assy (Refer to Fig. 11)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the claw of the T Reel Deck Assy ① from the chassis and remove the T Reel Deck Assy from its shaft.
4) Remove the Tension Spring (Ratchet) ② from the LS Chassis and turn the T Ratchet ③ in the direction of the arrow Ⓐ and remove it .
5) Turn the T Soft Gear Block Assy ④ in the direction of the arrow Ⓑ and remove it .

2. Precautions During Re-Assembly

1) Confirm that the protrusions of both the T Soft Gear Block Assy and T Ratchet are securely locked to the LS Chassis.
2) Be careful not to deform the claw.

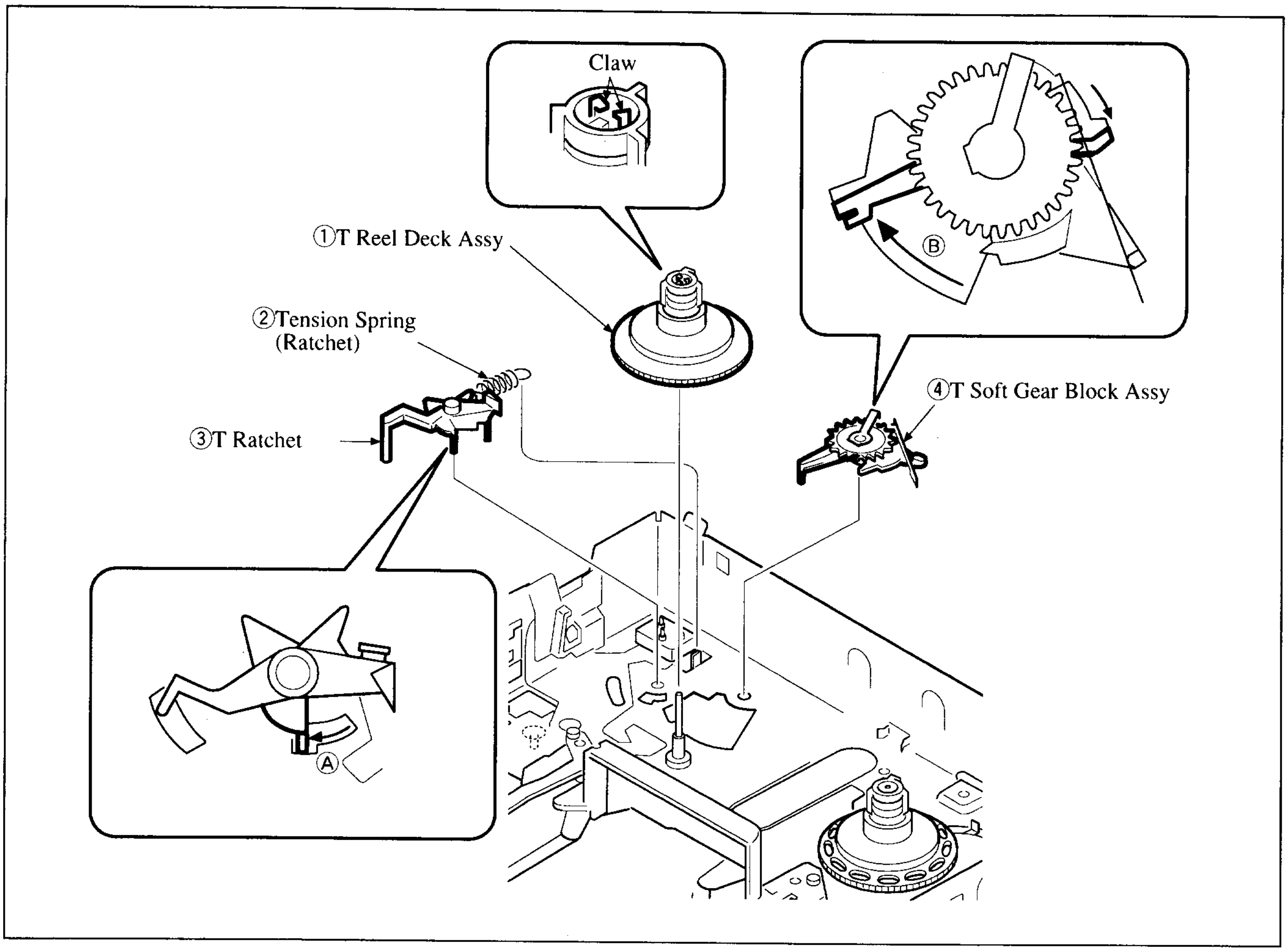


Fig. 11

3-7. Tension Regulator Band Assy, TG1 Arm Assy, S Reel Table Assy, S Ratchet, S Ratchet Release Plate, RVS Arm (Refer to Fig. 12)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the Tension Spring (TG1) ① from the LS Chassis.
4) Remove the screw (M 1.4×3) ② and remove the Tension Adjustment Block of the Tension Regulator Band Assy ④ form RVS Arm.
5) Release the S Ratchet ⑥ in the direction of the arrow Ⓐ and remove the Tension Regulator Band (while taking care not to bend the band) from the S Reel.
6) Remove the TG1 Arm Assy ③ from the LS Chassis, then remove the claw of the Tension Regulator Band Assy ④. (Refer to Fig. a)
7) Remove the claw of the S Reel Deck Assy ⑤ from the chassis and remove the S Reel Deck Assy from its shaft.
8) Remove the S Ratchet ⑥. (Because it is press-fitted, insert tip of screwdriver into the center of rotation and remove it.
9) Remove the Tension Spring (ratchet) ⑦ from the LS Chassis and remove the S Ratchet Release Plate ⑧.
10) Remove the Tension Spring ⑨ from the LS Chassis and remove the RVS Arm ⑩ by turning it..

2. Precautions During Re-Assembly

1) Confirm that the dowel of the S Ratchet Release Plate is inserted into the groove of the S ratchet and confirm that the center of the ratchet is press-fitted into bottom of the shaft. (It can be used again.)
2) When attaching the Tension Regulator Band Assy, take care not to bend it.
3) Pay attention that oil or grease is not spit on the surface of the Tension Regulated Band. (Pay attention also not to touch it with hand directly.)
4) Confirm that the tension regulator band is correctly inserted into the groove of the S Reel Deck Assy ⑤. (Refer to Fig. b)
5) When securing the Tension Adjustment Block using the screw, press it toward the position which gives the least tension, then tighten the fixing screw.
6) Before attaching the TG1 Arm Assy, coat the LS Chassis TG1 boss with oil (1/2 drop).
7) Do not touch the tape guide of the TG1 Arm Assy with bare hands.
8) Confirm that the claw of the S Reel Deck Assy is not deformed.

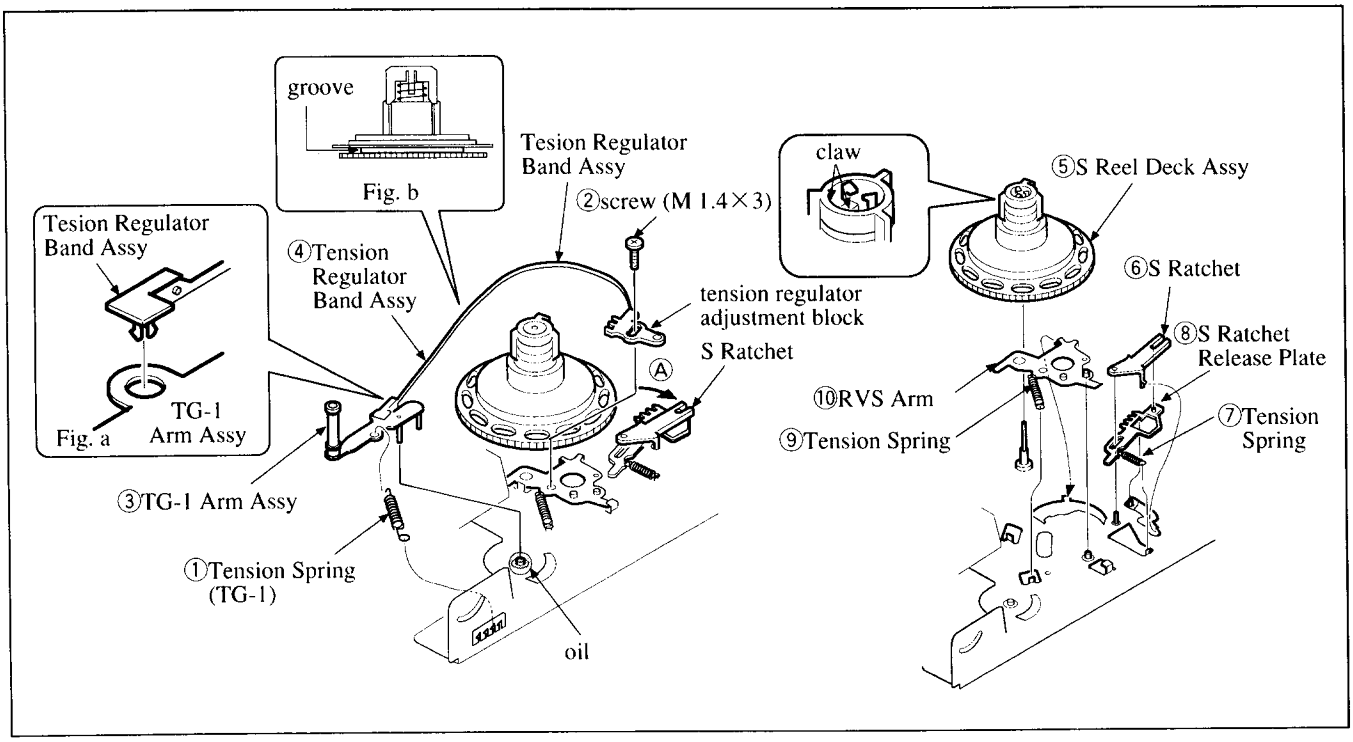

groove
Fig. b
Tesion Regulator Band Assy
②screw (M 1.4×3)
claw
⑤S Reel Deck Assy
Tesion Regulator Band Assy
④Tension Regulator Band Assy
⑥S Ratchet
tension regulator adjustment block
S Ratchet
Ⓐ
⑧S Ratchet Release Plate
⑩RVS Arm
⑨Tension Spring
⑦Tension Spring
TG-1 Arm Assy
Fig. a
③TG-1 Arm Assy
①Tension Spring (TG-1)
oil

Fig. 12

3-8. Pinch Arm Assy, TG4 Arm Block Assy (Refer to Fig. 13)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the LS Chassis Block Assy referring to section 3-5.
4) Remove the Torsion Spring (pinch) ① from an end of Pinch Arm and hook it on the cut-out Ⓐ of the LS Chassis.
5) Remove the screw (M 1.4×2.5) ② and remove the TG4 Retainer ③.
6) Remove the TG4 Arm Block Assy ④ and remove the Torsion Spring ⑤ while paying attention to the Torsion Spring ⑤.
7) Remove the Pinch Arm Assy ⑥. (Caution: The Pinch Press Roller is easy to drop. Pay attention not to drop it.)
8) Remove the Torsion Spring (pinch) ① from the cut-out of the LS Chassis in the order of Ⓐ then Ⓑ.

2. Precautions During Re-Assembly

1) Before attaching these parts, coat the LS chassis pinch arm boss and TG4 arm boss with grease SG-055G (Ref. No. J-13).
2) Do not touch the tape guide of the TG4 Arm Block Assy and roller of the Pinch Arm Assy with bare hand.
3) After coating the Pinch Press Shaft of the Pinch Arm Assy ③ with grease SG-055G (Ref. No. J-13), attach the Pinch Press Roller.

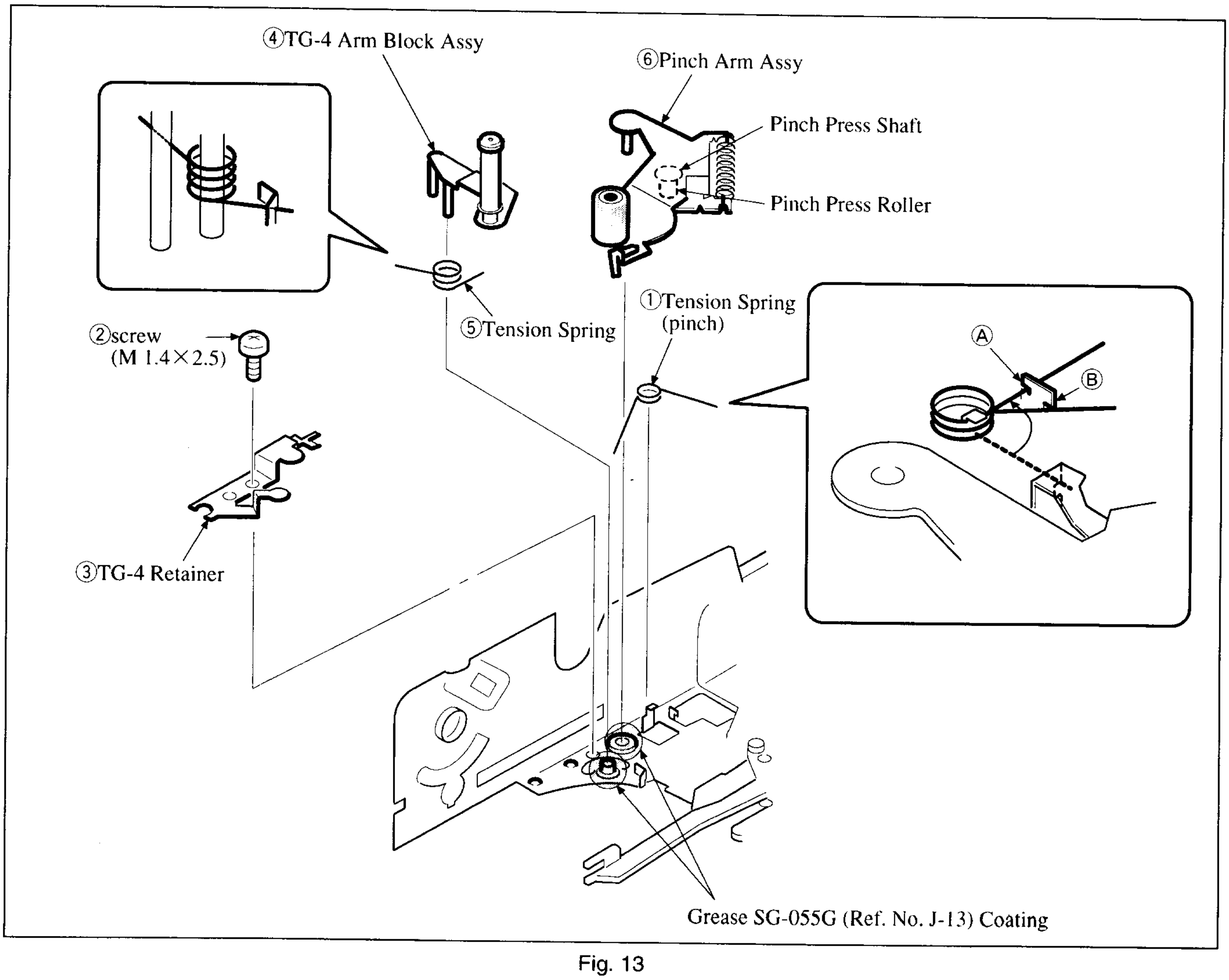

④TG-4 Arm Block Assy
⑥Pinch Arm Assy
Pinch Press Shaft
Pinch Press Roller
⑤Tension Spring
①Tension Spring (pinch)
②screw (M 1.4×2.5)
③TG-4 Retainer
Ⓐ
Ⓑ
Grease SG-055G (Ref. No. J-13) Coating

Fig. 13

3-9. LS Cam Plate, LS Guide Cover, Lid Opener, EJ Arm, Lock Guide (Refer to Fig. 14)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the LS Chassis Block Assy referring to section 3-5.
4) Remove the two screws (M 1.4×2.5) ① and remove the the LS Cam Plate ②.
   In this state, write a mark on the screw ① and on the LS Chassis indicating the position of the LS Cam Plate which helps during re-assembly.
5) Remove the LS Guide Cover ③.
6) Remove the Lock Guide ④ in the upward direction. (Refer to Fig. a)
7) Remove the Lid Open ⑤ in the direction of the arrow Ⓒ while pushing Ⓑ portion .
8) Remove the EJ Arm ⑥ . (The EJ Arm ⑥ is press-fitted. If the EJ Arm ⑥ is not damaged, it is not necessary to replace.)

2. Precautions During Re-Assembly

1) After the captioned parts are attached, confirm that the respective claws and dowels are engaged completely.
2) If the EJ Arm ⑥ is removed, be sure to replace it with the new replacement EJ Arm.
3) If any mark is not written when removing the LS Cam Plate ②, adjust and attack it as shown in Fig. b.

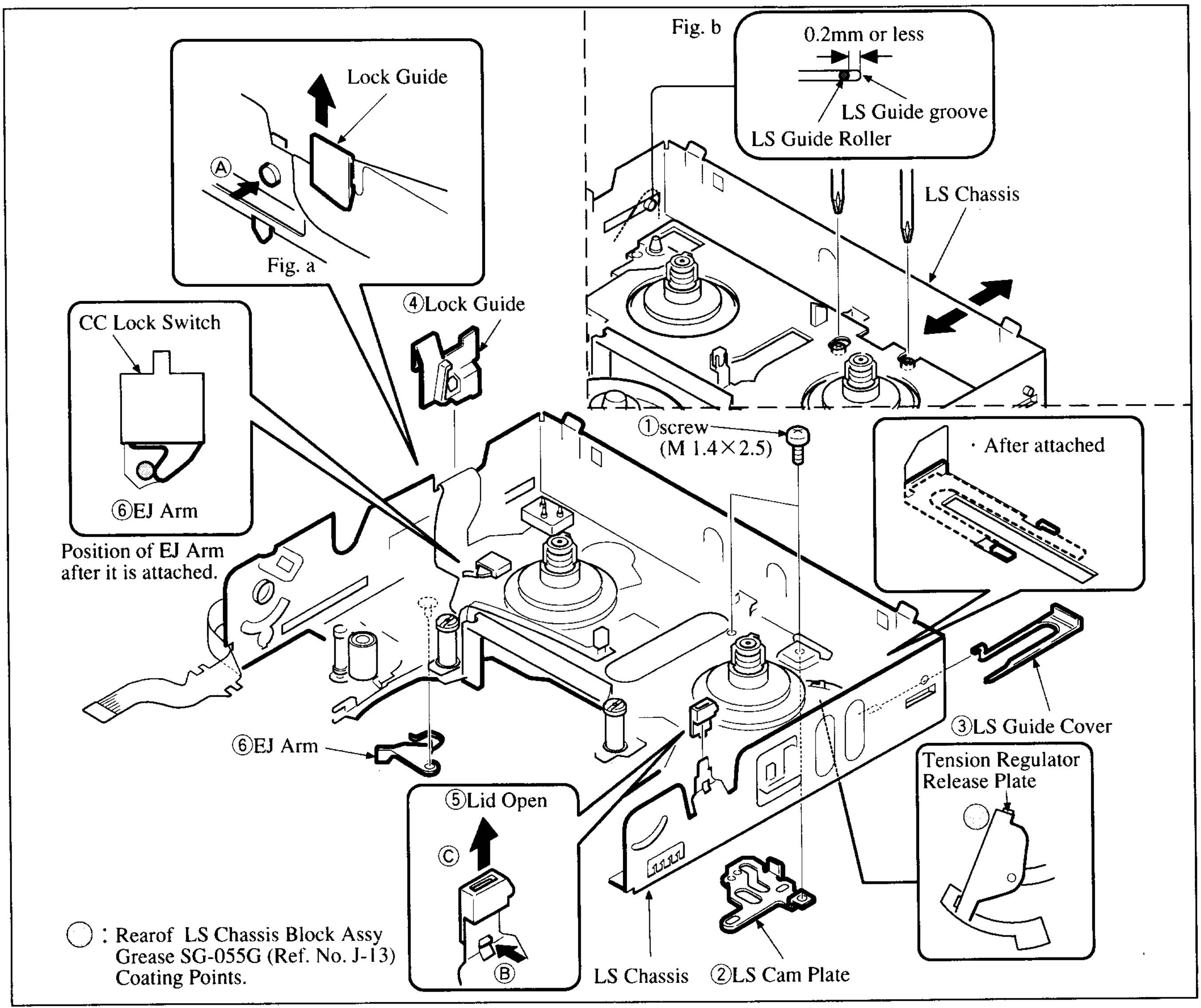

Lock Guide
Ⓐ
Fig. a
CC Lock Switch
⑥EJ Arm
Position of EJ Arm after it is attached.
④Lock Guide
Fig. b
0.2mm or less
LS Guide groove
LS Guide Roller
LS Chassis
①screw (M 1.4×2.5)
· After attached
⑥EJ Arm
⑤Lid Open
Ⓒ
Ⓑ
③LS Guide Cover
Tension Regulator Release Plate
LS Chassis
②LS Cam Plate
○ : Rearof LS Chassis Block Assy Grease SG-055G (Ref. No. J-13) Coating Points.

Fig. 14

3-10. Guide Base (S) and (T) Block Assemblies, Guide Rail (Refer to Fig. 15)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the LS Chassis Block Assy referring to section 3-5.
4) While pushing the GB Stoppers (S) and (T) in the direction of arrow Ⓐ, press the guide arm in the direction of the arrow Ⓑ, and turn the Guide Base (S) and (T) Block Assemblies : ① and ② in the direction of the arrow Ⓒ respectively, and remove them.
5) Remove the two screws (M 1.4×2.5) ③ and remove the the Guide Rail Assy ④.
6) Remove the Stopper (S) and (T) : ⑤ and ⑥, then remove the GB Stopper S and T: ⑦ and ⑧.

2. Precautions During Re-Assembly

1) Pay attention not to deform the Guide Rail.
2) Do not touch the tape guide of the Guide Base (S) and (T) Block Assemblies with bare hand.
3) Pay attention not to deform the Stoppers (S) and (T).
4) When attaching the Guide Base (S) and (T) Blocks to the Guide Rail, move back the Guide Bases until the GB Stoppers (S) and (T) are locked. ("Click" sounds.)
5) After the captioned parts are attached, perform section "4. TAPE PATH ADJUSTMENT".

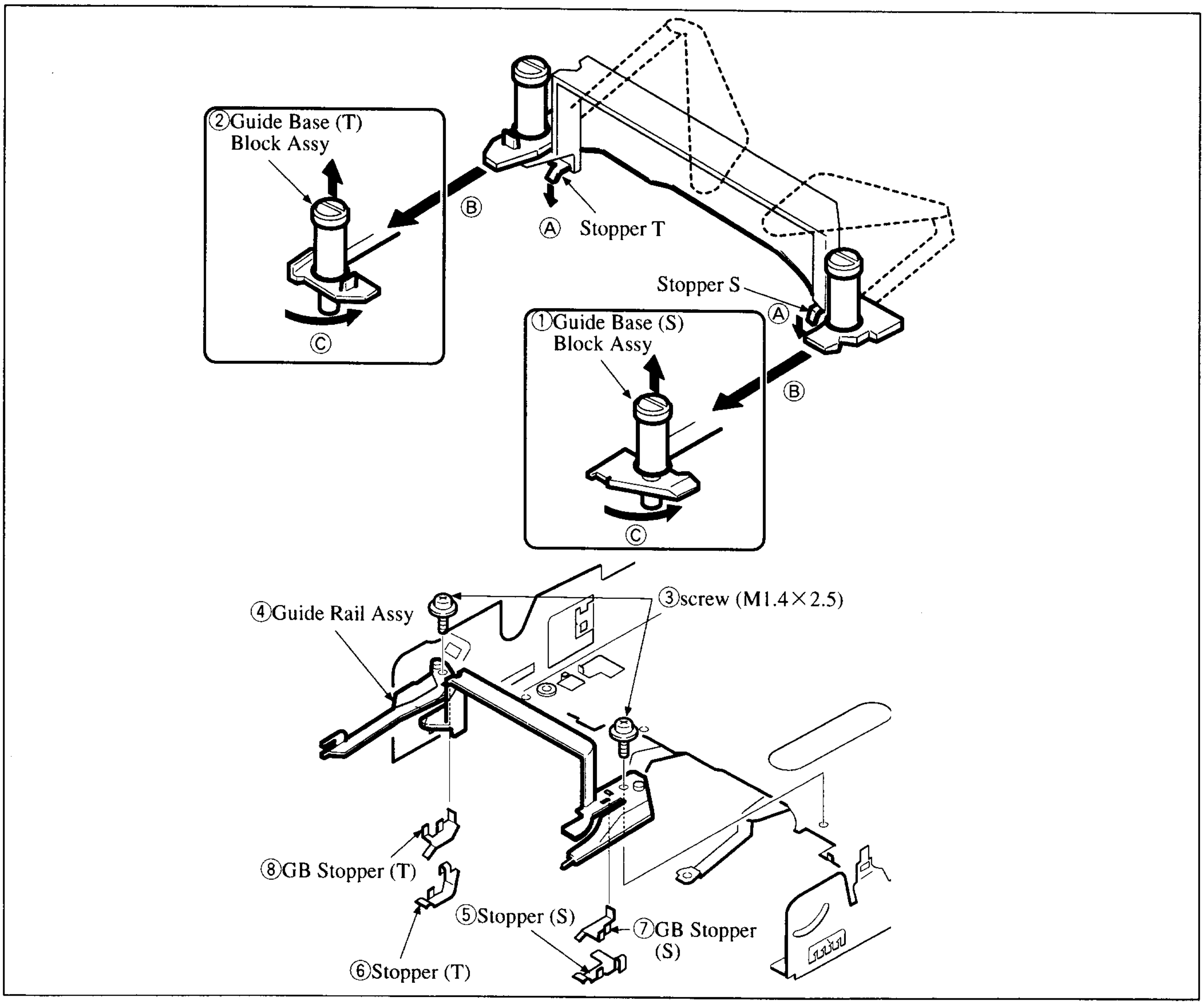

②Guide Base (T)
Block Assy
Ⓑ
Ⓒ
Ⓐ Stopper T
Stopper S
Ⓐ
①Guide Base (S)
Block Assy
Ⓑ
Ⓒ
④Guide Rail Assy
③screw (M1.4×2.5)
⑧GB Stopper (T)
⑤Stopper (S)
⑦GB Stopper
(S)
⑥Stopper (T)

Fig. 15

- **PARTS CONSTITUTING THE MECHANISM CHASSIS**

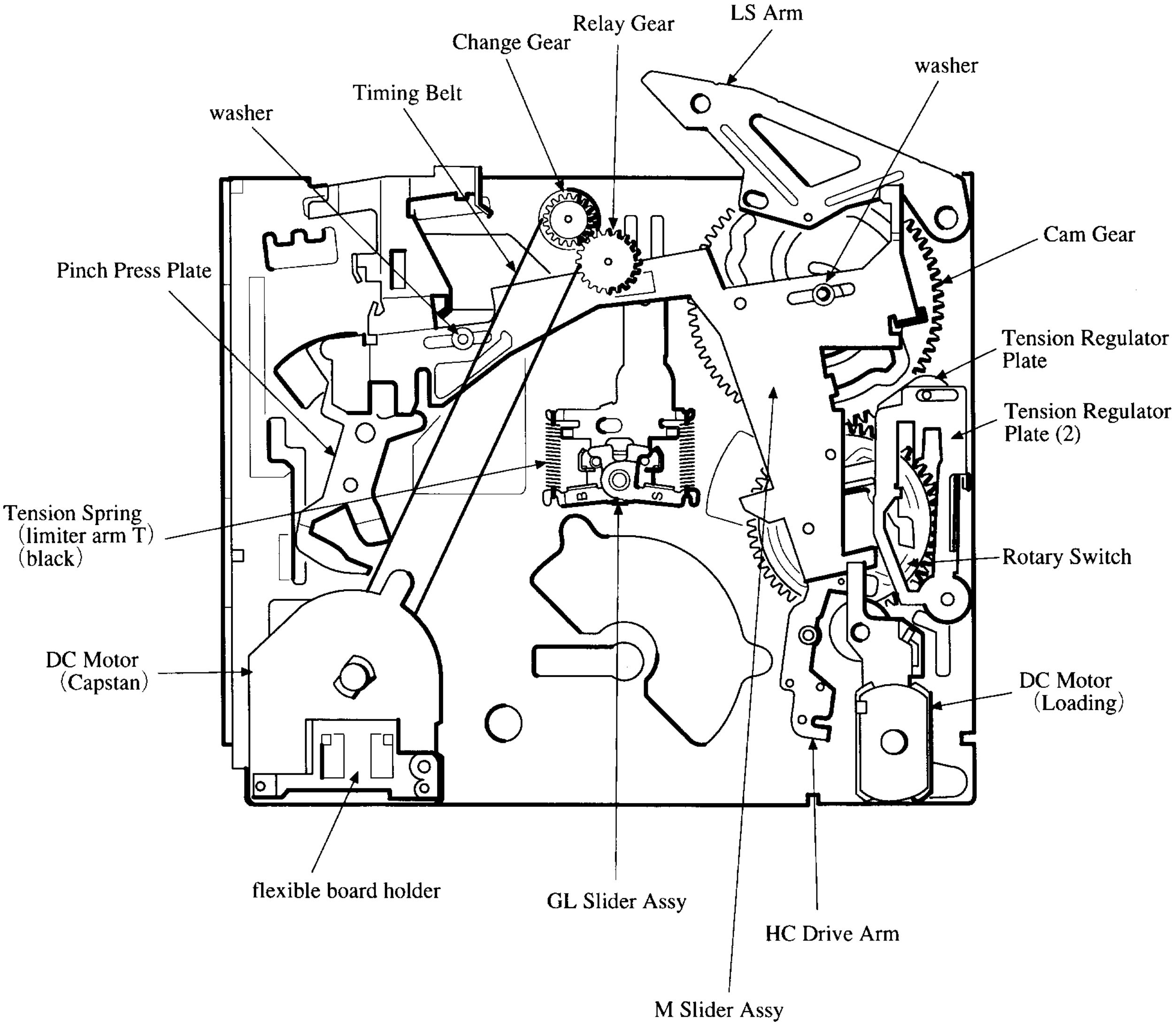

Relay Gear
Change Gear
LS Arm
washer
Timing Belt
washer
Cam Gear
Pinch Press Plate
Tension Regulator Plate
Tension Regulator Plate (2)
Tension Spring (limiter arm T) (black)
Rotary Switch
DC Motor (Capstan)
DC Motor (Loading)
flexible board holder
GL Slider Assy
HC Drive Arm
M Slider Assy

Fig.16

3-11. DC Motor Assy (Loading) (Refer to Fig. 17)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove soldering from the Ⓐ portion.
8) Remove the screw (M 1.4×2.5) ① and remove the Motor Holder Block Assy ② from the mechanism chassis along with the claw beneath the Motor Holder Block Assy as shown by the arrow Ⓑ.
9) Remove the Motor Shield ③ in the direction of the arrow Ⓒ (by opening the two ★ star marked points).
10) Release the claw on top of the Motor Holder ⑤ and remove the DC Motor Assy ④ in the direction of the arrow Ⓓ.
11) Remove the Motor Holder Sleeve ⑥, Gear A⑦ and Worm Shaft ⑧ in this order.

2. Precautions During Re-Assembly

1) Before attaching the Gear A ⑥, coat the Retainer Shaft Ⓔ with grease SG-055G (Ref. No. J-13).
2) After assembling the Motor Holder Block Assy, coat the six locations shown by Fig. a with grease SG-055G (Ref. No. J-13).
3) The HC Drive Arm is easy to drop. Confirm that it is attacked referring to Fig. 19.

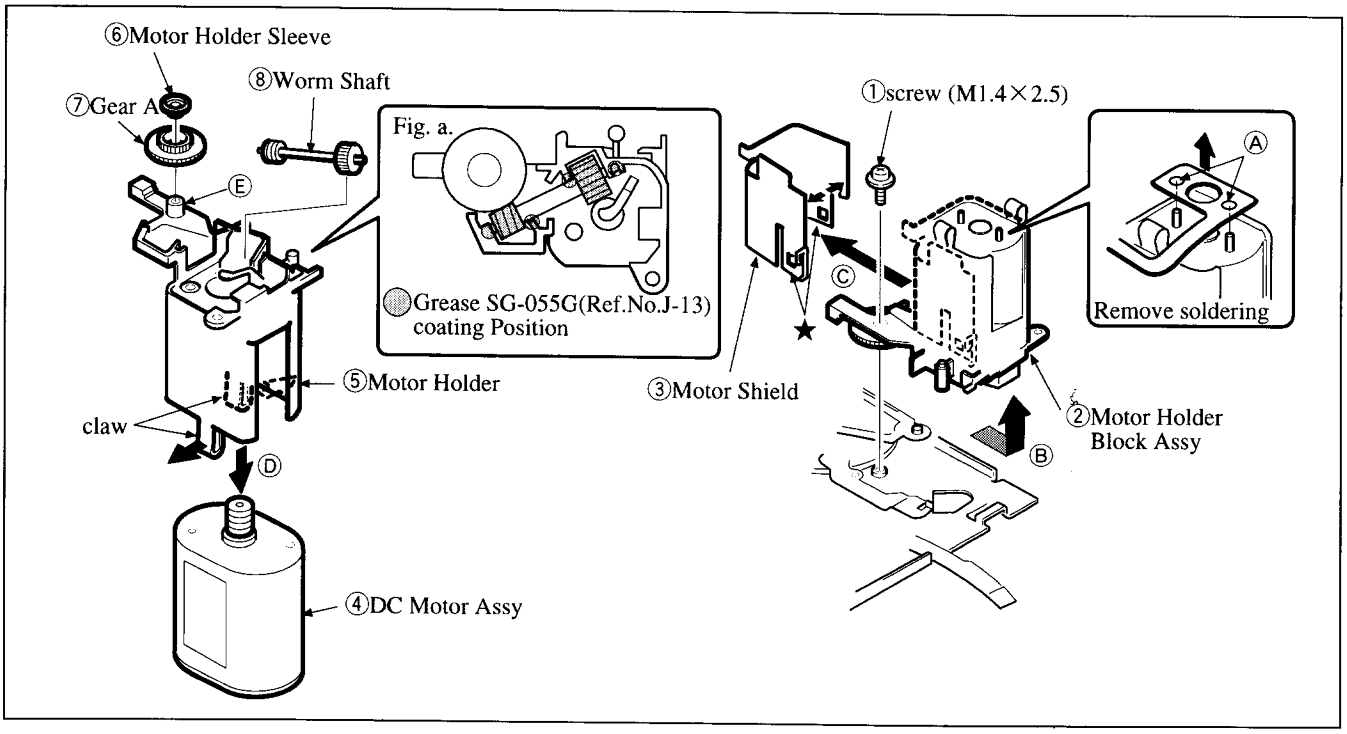

⑥Motor Holder Sleeve
⑧Worm Shaft
⑦Gear A
Ⓔ
Fig. a.
●Grease SG-055G(Ref.No.J-13) coating Position
①screw (M1.4×2.5)
Ⓐ
Remove soldering
Ⓒ
★
⑤Motor Holder
③Motor Shield
②Motor Holder Block Assy
Ⓑ
claw
Ⓓ
④DC Motor Assy

Fig. 17

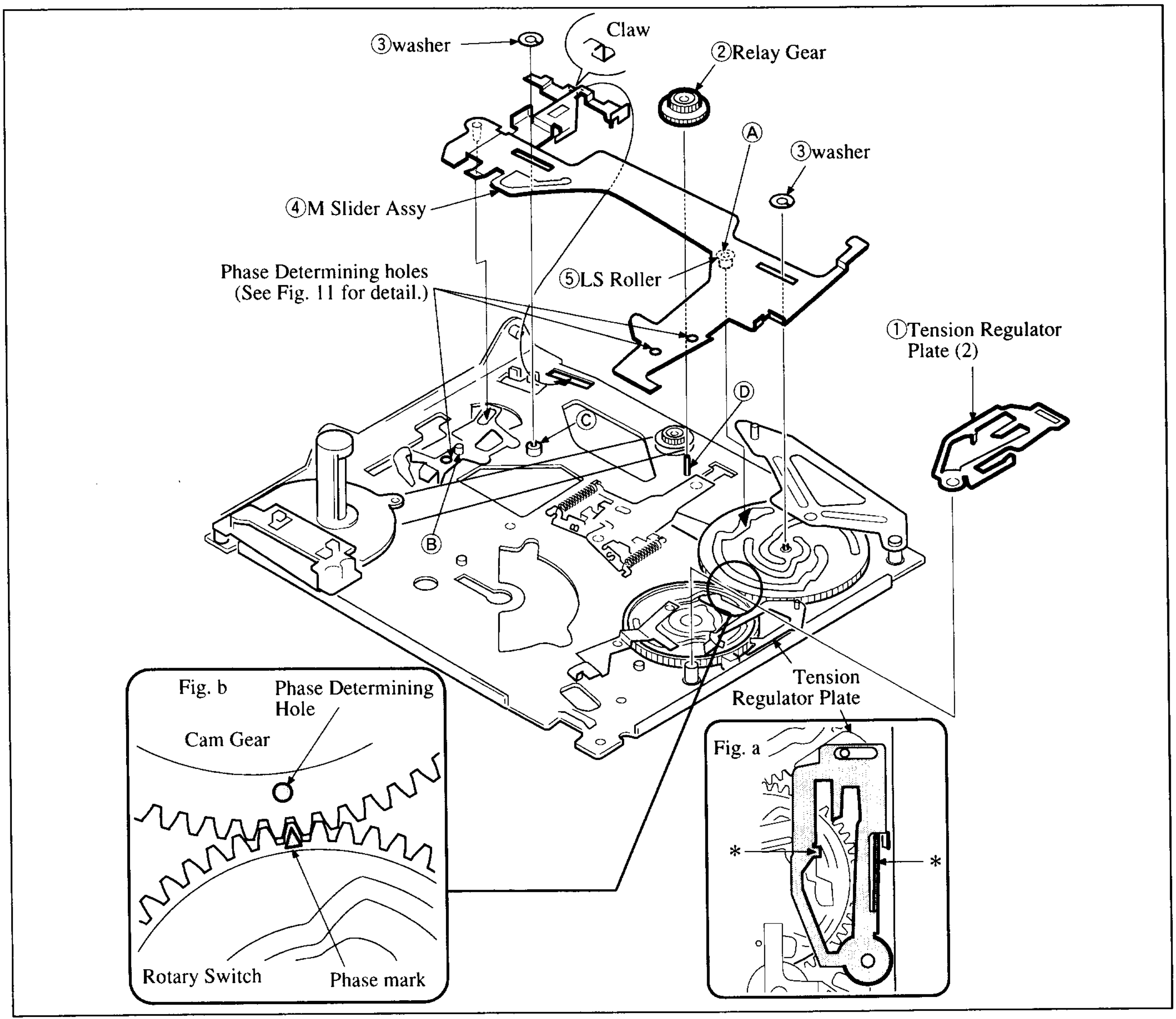
3-12. Tension Regulator Plate 2, Relay Gear, M Slider Assy (Refer to Fig. 18)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC motor referring to section 3-11.
8) Remove the Tension Regulator Plate 2 ①.
9) Remove the Relay Gear ②.
10) Remove the two washers ③. Remove the M Slider Assy ④. At the point, confirm that the LS Roller ⑤ is not dropped.

2. Precautions During Re-Assembly

1) Before attaching the M Slider Assy ④, coat the LS Roller Shaft Ⓐ on the back of the M Slider Assy, the Pinch Press Plate Shaft Ⓑ and the mechanism chassis M Slider Axis Ⓒ with grease SG-055G (Ref. No. J-13). (Refer to Fig. b)
2) While confirming the phase-determining holes, attach the M Slider Assy ④ while paying attention to the claw.
3) Attach the Tension Regulator Plate 2 ① inside the Tension Regulator Plate. (Refer to the asterisk * Marked portion of Fig. a)
4) Before attaching the Relay Gear ②, coat the mechanism chassis Relay Gear Axis Ⓓ with grease SG-055G (Ref. No. J-13).



③washer
Claw
②Relay Gear
Ⓐ
③washer
④M Slider Assy
Phase Determining holes
(See Fig. 11 for detail.)
⑤LS Roller
①Tension Regulator Plate (2)
Ⓓ
Ⓒ
Ⓑ
Fig. b
Phase Determining Hole
Cam Gear
Rotary Switch
Phase mark
Tension Regulator Plate
Fig. a
*
*

Fig. 18

3-13. LS Arm, HC Drive Arm, Pinch Press Plate, Tension Regulator Plate (Refer to Fig. 19)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm ①. At this point, confirm that the LS Roller ② is not dropped.
10) Remove the HC Drive Arm ③, Pinch Press Plate ④ and Tension Regulator Plate ⑤.

2. Precautions During Re-Assembly

1) Before attaching the captioned parts, confirm that phases of the Cam Gear and the Rotary Switch agree. (See Fig. a.)
2) Insert the dowel of the Tension Regulator Plate ⑤ into the groove outside the rotary switch.
3) Before attaching the Pinch Press Plate ④, check for grease on the mechanism chassis Pinch Press Plate Shaft Ⓐ. If grease cannot be found, coat it with grease SG-055G (Ref. No. J-13). After attaching the Pinch Press Plate ④, align its phase hole until it agrees with the phase-determining hole on the mechanism chassis.
4) Insert the dowel of the HC Drive Arm ③ into the groove inside the rotary switch.
5) Before attaching the LS Arm ①, coat the LS roller shaft of the LS Arm ① with grease SG-055G (Ref. No. J-13).

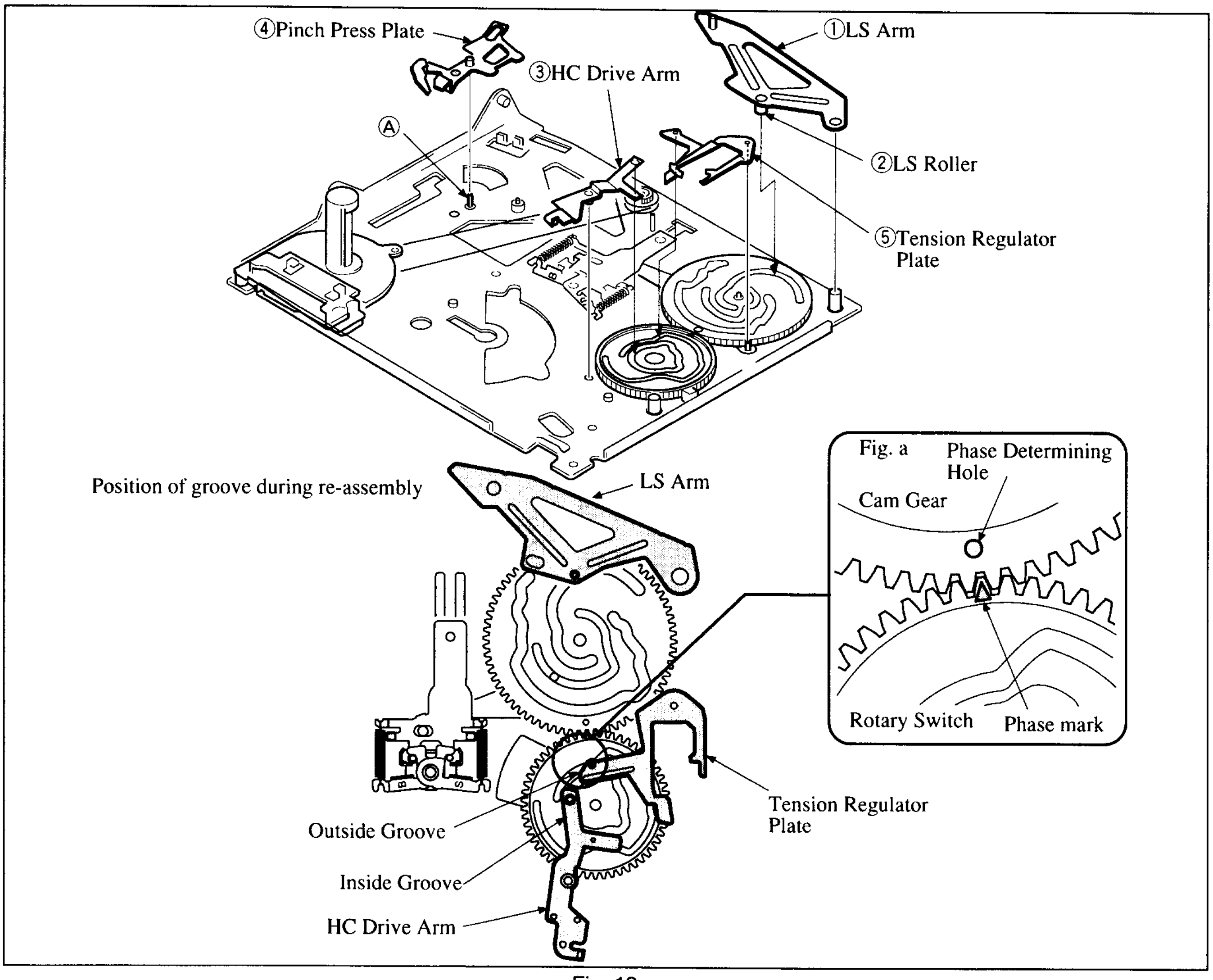

④Pinch Press Plate
③HC Drive Arm
①LS Arm
Ⓐ
②LS Roller
⑤Tension Regulator Plate
Position of groove during re-assembly
LS Arm
Fig. a
Phase Determining Hole
Cam Gear
Rotary Switch
Phase mark
Tension Regulator Plate
Outside Groove
Inside Groove
HC Drive Arm

Fig. 19

3-14. Cam Gear (Refer to Fig. 20)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm and Tension Regulator Plate referring to section 3-13.
10) Remove the Cam Gear ①.

2. Precautions During Re-Assembly

1) Before attaching the Cam Gear ①, align the phase mark on the rotary switch until it agrees with the phase-determining hole Ⓐ on the mechanism chassis, and align the GL Arm's phase mark Ⓑ until it agrees with the phase-determining hole Ⓐ on the mechanism chassis. Coat the mechanism's chassis Gear Axis Ⓐ with grease SG-055G (Ref. No. J-13).
2) Attach the Cam Gear ① so that its phase hole agrees with the phase mark on the rotary switch. (Refer to Fig. a)
3) After the Cam Gear ① is attached, coat the GL Arm Axis Block of the cam gear with grease SG-055G (Ref. No. J-13).

Reference : The phase marks of the Cam Gear and Rotary Switch can also be checked from the rear side of mechanism chassis. It means that the phase can be confirmed after mechanism deck is fully re-assembled.

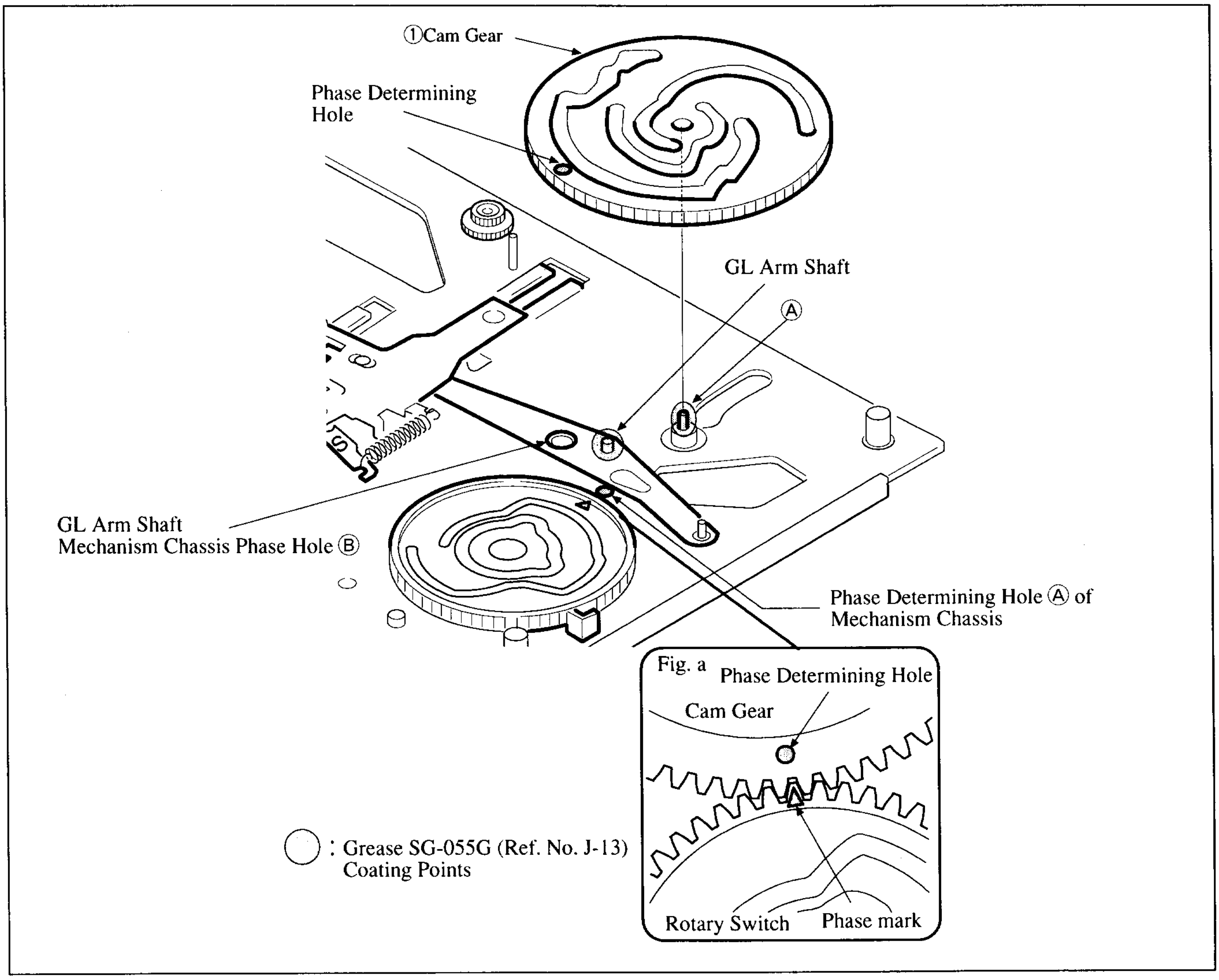

①Cam Gear
Phase Determining Hole
GL Arm Shaft
Ⓐ
GL Arm Shaft
Mechanism Chassis Phase Hole Ⓑ
Phase Determining Hole Ⓐ of Mechanism Chassis
Fig. a
Phase Determining Hole
Cam Gear
Rotary Switch
Phase mark
○ : Grease SG-055G (Ref. No. J-13) Coating Points

Fig. 20

3-15. GL Slider Assy, GL Arm (Refer to Fig. 21)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm and Tension Regulator Plate referring to section 3-13.
10) Remove the Cam Gear referring to section 3-14.
11) Remove the GL Slider Assy ① by sliding it in the direction of the arrow Ⓐ.
12) Remove the GL Arm ②.

2. Precautions During Re-Assembly

1) The Tension Spring T③ is colored black and the Tension Spring S④ is colored silver.
2) Coat the position shown in Fig. a of the GL Slider Assy ① with grease SG-055G (Ref. No. J-13).
3) Coat the four points Ⓑ where GL slider is attached on the mechanism chassis with grease SG-055G (Ref. No. J-13).
4) After attaching the GL Arm ② and the GL Slider Assy, align the GL arm phase hole until it agrees with the phase-determining hole on the mechanism chassis.

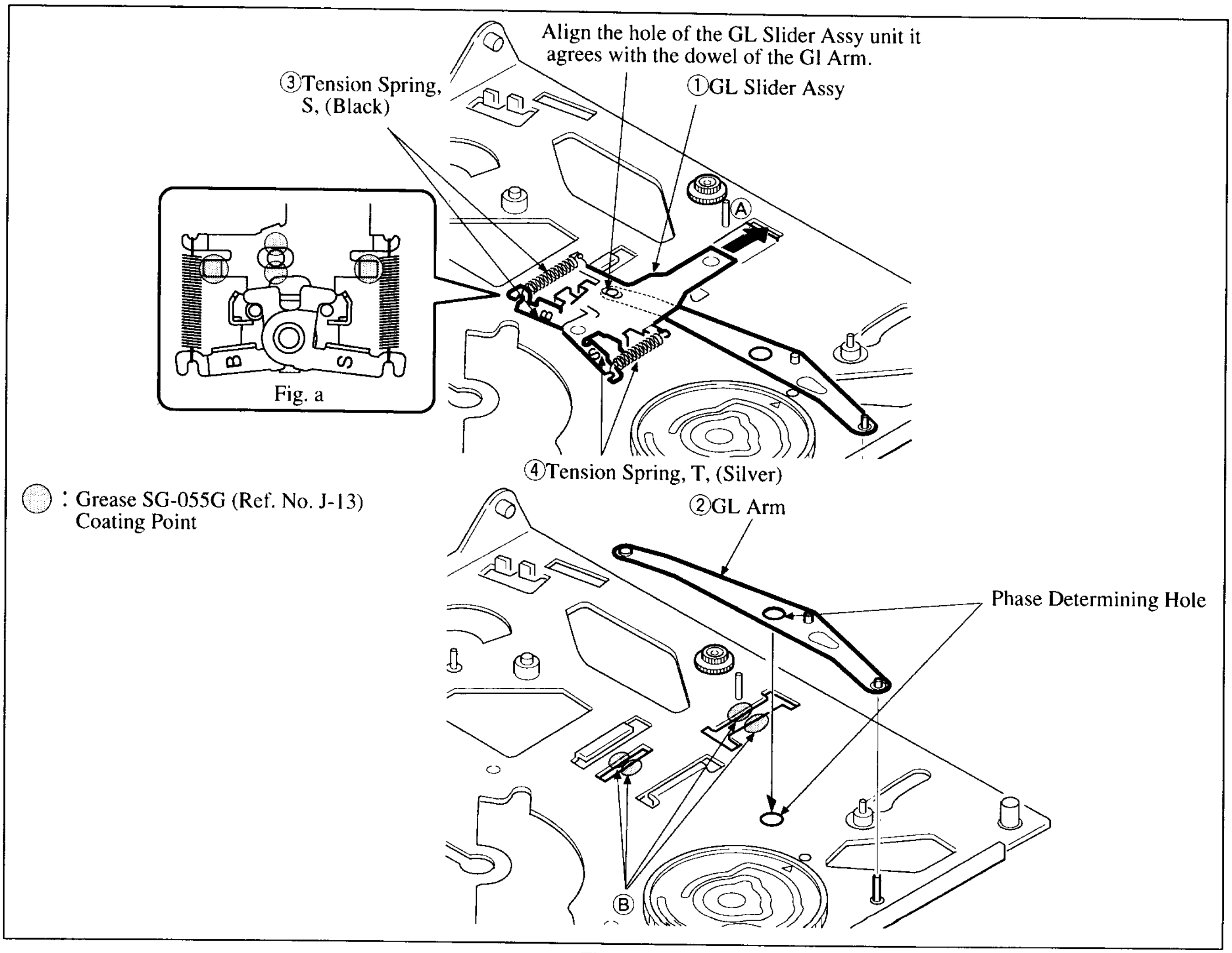

Align the hole of the GL Slider Assy unit it agrees with the dowel of the Gl Arm.
③Tension Spring, S, (Black)
①GL Slider Assy
Ⓐ
B
S
Fig. a
④Tension Spring, T, (Silver)
⊙ : Grease SG-055G (Ref. No. J-13) Coating Point
②GL Arm
Phase Determining Hole
Ⓑ

Fig. 21

3-16. Rotary Switch (Refer to Fig. 22)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm, Tension Regulator Plate, HC Drive Arm and Pinch Press Plate referring to section 3-13.
10) Remove the Cam Gear referring to section 3-14.
11) Remove soldering the portion Ⓐ on the rear of the Rotary Switch. (Pay attention at this moment that the GL Slider and GL Arm do not drop.)
12) While lifting up the portion Ⓑ about 1 mm (pay attention not to break it), hold the portion Ⓒ and turn it in the direction of the arrow Ⓓ to remove the Rotary Switch.

2. Precautions During Re-Assembly

1) Before attaching the Rotary Switch by soldering on the FP-220 board, insert the portion Ⓑ dowel into the hole on the mechanism chassis. Confirm that the three claws are engaged with the mechanism chassis.

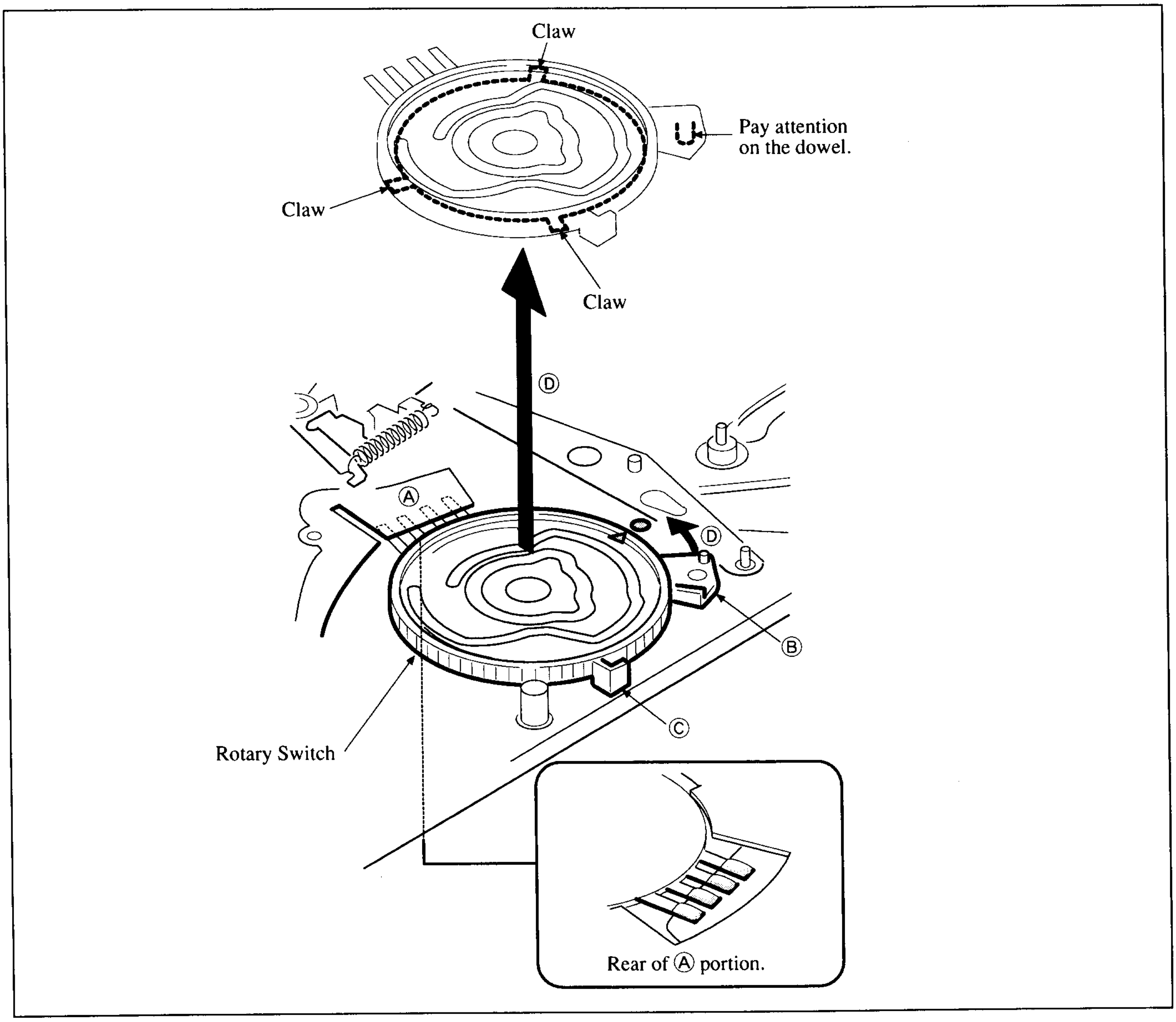


Fig. 22

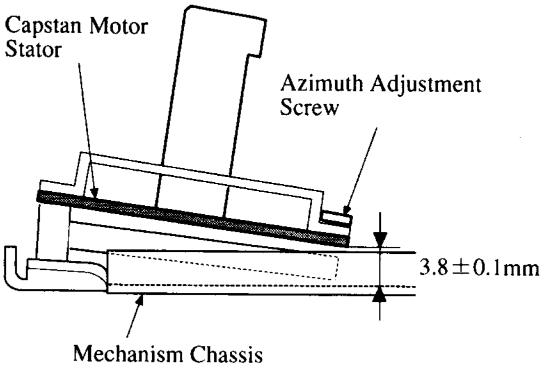
3-17. Capstan Motor (Refer to Fig. 23)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the Pinch Press Plate referring to section 3-13.
10) Remove the screw (M 1.4×6.7) ① and remove the Flexible Board Holder ②.
11) Remove the two screws (M 1.4×6.7) ③ and remove the Capstan Motor ④, Timing Belt ⑤ and Capstan Spacer ⑥.
12) Remove the washer ⑦ and remove the Changer Gear ⑧.

2. Precautions During Re-Assembly

1) Confirm that the timing belt is not twisted.
2) Do not touch the capstan with bare hand.
3) Lubricate the mechanism chassis's Change Gear shaft Ⓐ.
4) After attaching the Capstan Motor, perform the capstan azimuth adjustment.


Capstan Motor Stator
Azimuth Adjustment Screw
3.8±0.1mm
Mechanism Chassis

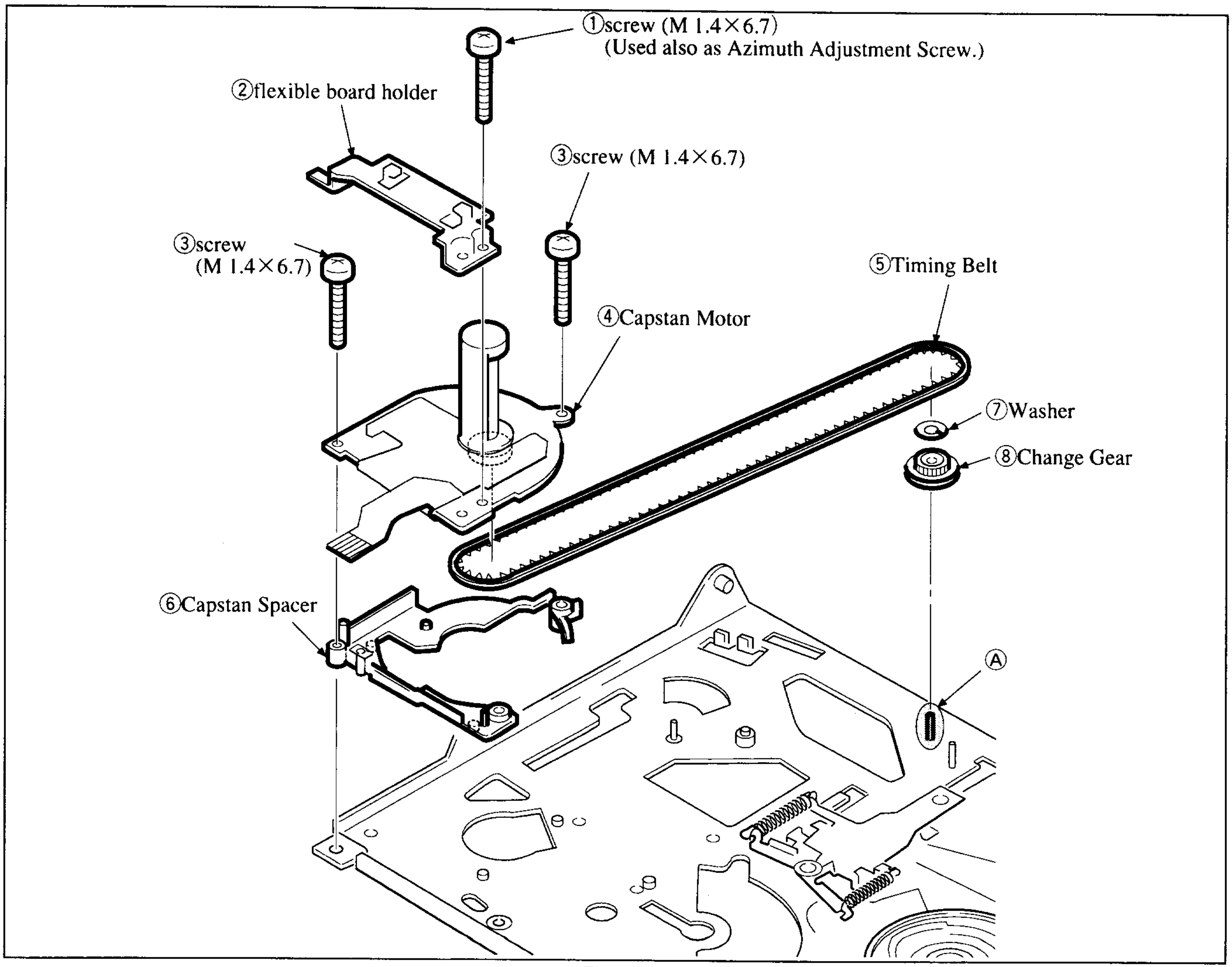

①screw (M 1.4×6.7) (Used also as Azimuth Adjustment Screw.)
②flexible board holder
③screw (M 1.4×6.7)
③screw (M 1.4×6.7)
⑤Timing Belt
④Capstan Motor
⑦Washer
⑧Change Gear
⑥Capstan Spacer
Ⓐ

Fig. 23

3-18. Tension Regulator Position Adjustment (Refer to Fig.24)

1. Adjustment Procedure

1) Insert a cassette Tape and run the Tape in PB mode.
2) While tape is running, confirm that the distance between the LS Chassis and TG-1 Guide's top flange is 8.3mm.
3) If not, proceed to step 4).
4) Loosen the screw ① (M 1.4×3).
5) If the TG-1 Guide is located inside the specified position, move position of the Tension Regulator Band Assy using the FWD B.T. Adjustment tool screwdriver (Ref. No. J-9) as shown in the direction of the arrow Ⓐ. If it is located outside, move it in the direction of the arrow Ⓑ.
6) Tighten the screw ① (M 1.4×3).

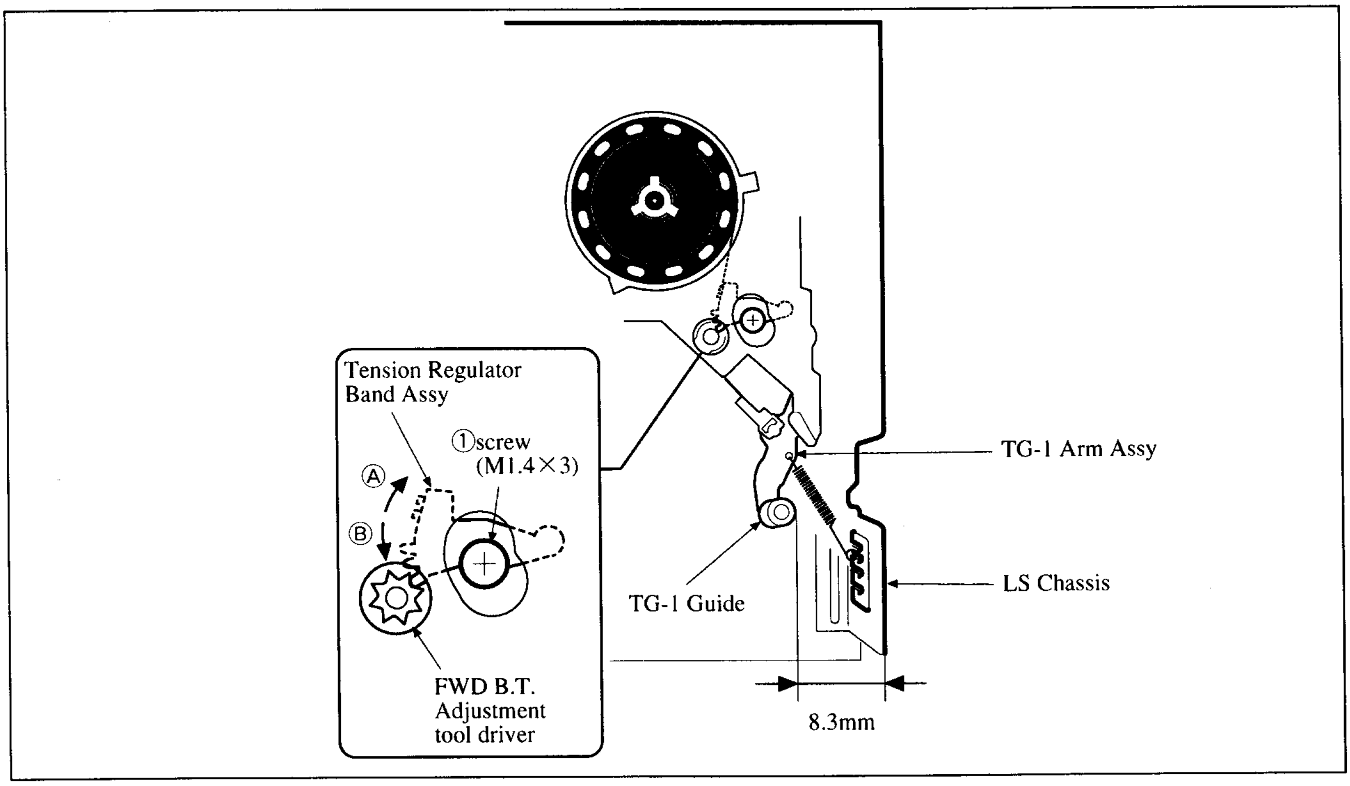

Tension Regulator Band Assy
①screw (M1.4×3)
Ⓐ
Ⓑ
FWD B.T. Adjustment tool driver
TG-1 Guide
TG-1 Arm Assy
LS Chassis
8.3mm

Fig.24

3-19. FWD Tape Hold-Back Tension Adjustment (Refer to Fig. 25)

1. Adjustment Procedure

1) Insert the torque measurement cassette to the machine.
2) Put the machine in the FWD mode. Confirm that the reading on the S side is in the range from 8.0 to 10.5 g•cm. If the reading is outside the specification range, make the following adjustments.
3) If the reading is higher than the specification, change the TG-1 Tension Spring to the side Ⓐ.
4) If the reading is lower than the specification, change the TG-1 Tension Spring to the side Ⓑ.

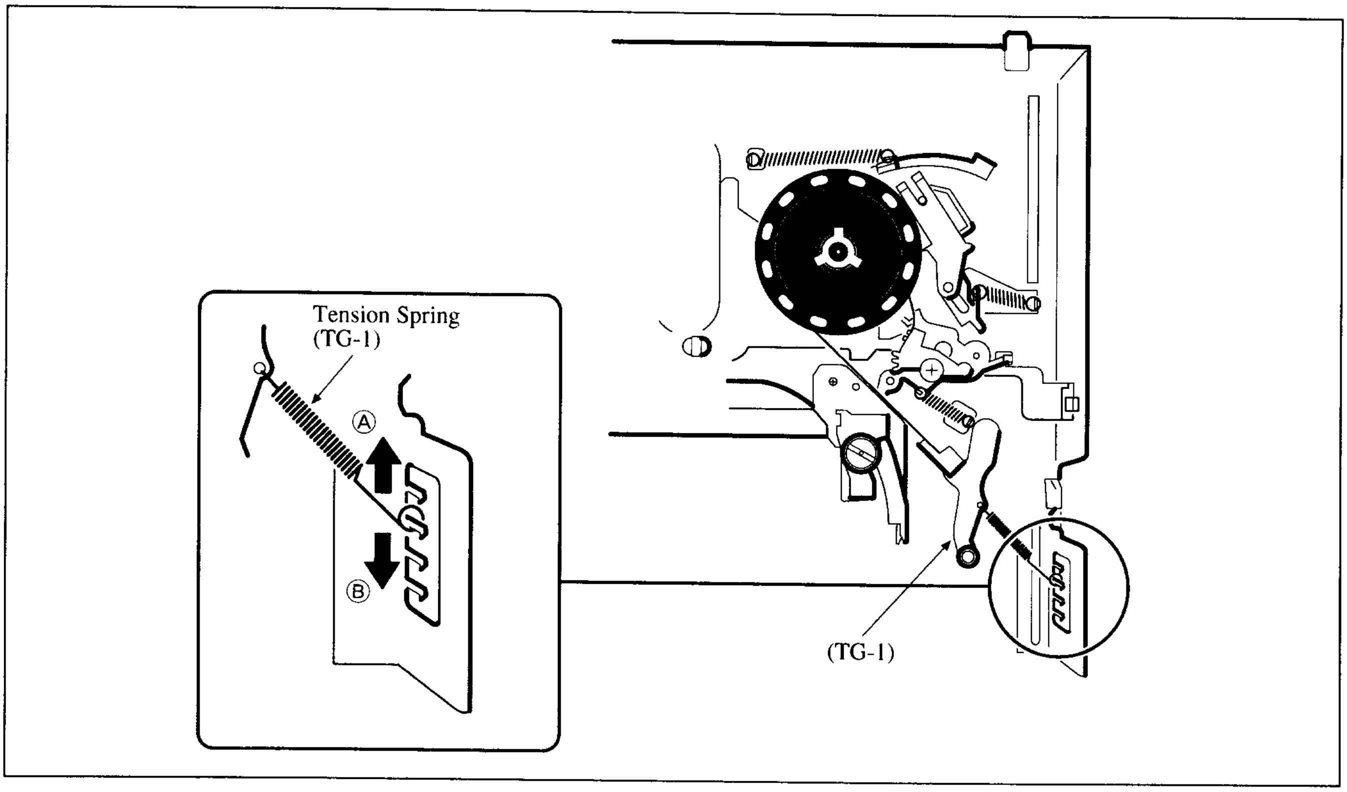


Fig. 25

4. TAPE PATH ADJUSTMENT

Purpose:	Adjusts the head linearity.
Adjustment Error:	Noise appears on top and bottom of display when playing back the tape recorded by other machines.

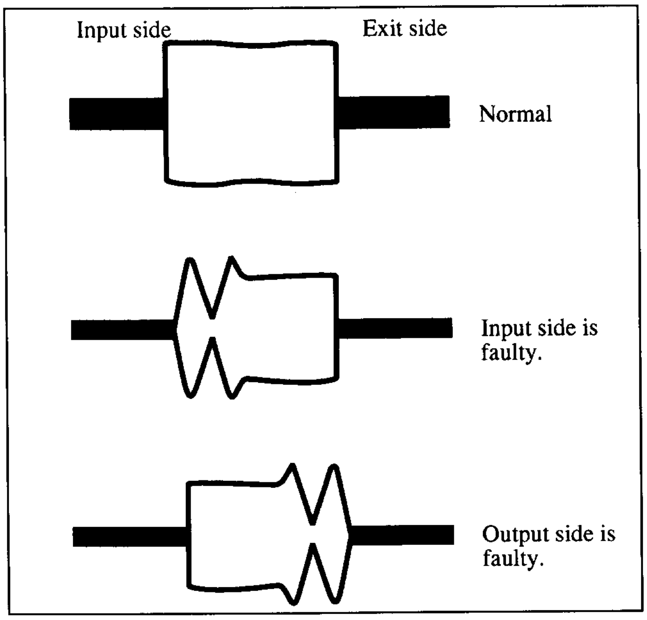


Fig. 26

4-1. Preparations for Adjustments

1) Clean the tape running surface (tape guide, drum, capstan, pinch roller).
2) Connect the adjustment remote commander to the REMOTE terminal (JACK block).
3) Establish the PATH mode using the adjustment remote commander (Track Shift mode)* to cancel auto tracking.
4) Connect an oscilloscope.
   CH1: Test connector PB RF terminal
   External trigger: Test connector PB SWP terminal
5) Playback the tracking alignment tape WR5-1NP (NTSC) or WR5-1CP (PAL) (Ref. No. J-6).
6) Check to see that RF waveform is flat at input and exit sides on oscilloscope.
   If it not flat, perform the following section 4-2 until it is flat.
7) After completing the adjustment, release the PATH mode (Track Shift mode).*.

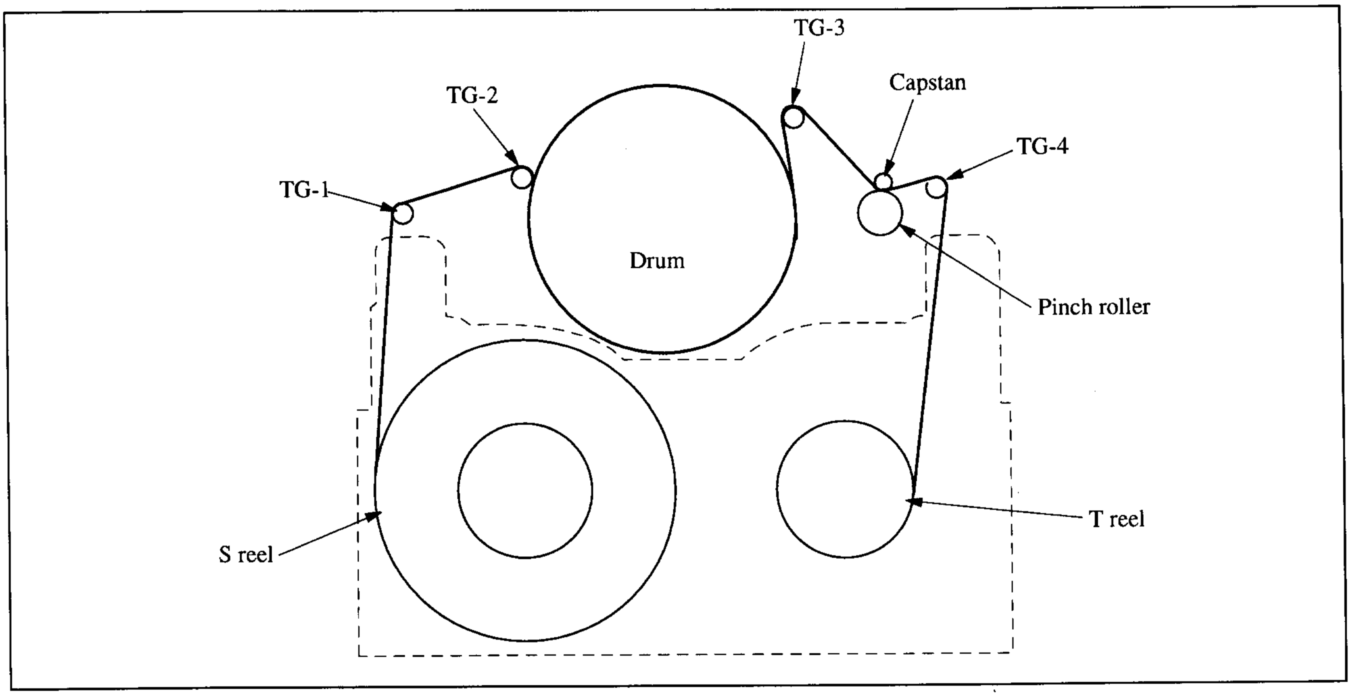


Fig. 27

* How to enter and exit the Track Shift mode. (In the case of CCD-TR420E/TR440E)

Entering the Track Shift mode

1. Select page : 6, address : 00 set data : 01 and press the PAUSE button.
2. Select page : 7, address : 01 set data : 03 and press the PAUSE button.

Exitting the Track Shift mode

1. Select page : 7, address : 01 set data : 00 and press the PAUSE button.
2. Select page : 6, address : 00 set data : 00 and press the PAUSE button.

4-2. Tracking Adjustment (Refer to Fig. 28.)

1) Playback the tracking alignment tape WR5-1NP (NTSC) or WR5-1CP (PAL) (Ref. No. J-6).
2) Adjust the tape guide No. 2 until the input side waveform becomes flat.
3) Adjust the tape guide No. 3 until the input side waveform becomes flat.

☆ Zenith adjustment screws for the TG-2 and TG-3 do not need to be adjusted.

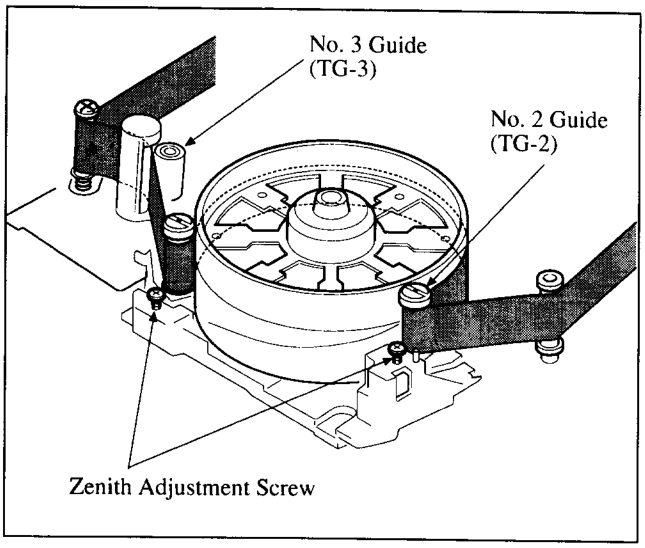


Fig. 28

4-3. No. 4 Guide (TG-4) Adjustment (Refer to Fig. 29.)

1) Playback a tape in REV mode.
2) Confirm that tape slack does not occur in between the guide No. 3 (TG-3) ① and Capstan ②. If tape slack is found, turn the height adjustment screw ④ of the Guide No. 4 (TG-4) ③ until tape slack is removed.
3) Playback a tape in FWD mode. Confirm that tape slack does not occur in between the guide No. 4 (TG-4) ③ and capstan ②. (Specification = 0.5 mm or less) If tape slack of more than 0.5 mm is found, turn the TG-4 nut ④ until the slack is 0.5 mm or less. Playback tape in REV mode and confirm that tape slack in between the guide No. 3 (TG-3) ① and capstan ② is 0.3 mm or less, the adjustment is complete.

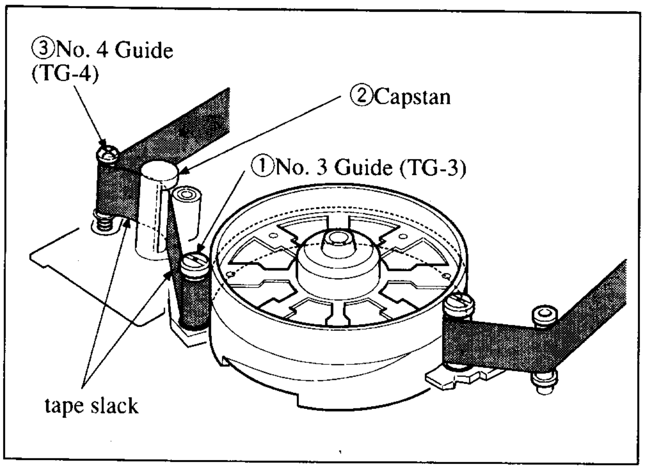


Fig. 29

4-4. CUE, REV Waveforms Check (Refer to Fig. 30.)

1) Playback the tracking alignment tape in REV mode.
   Confirm that pitches between the peaks of the waveform are equally spaced for 5 seconds or longer.
   The pitches are not equally spaced, perform sections "4-2. Tracking Adjustment" and section "4-3. No. 4 Guide Adjustment".
2) Playback the tracking alignment tape in CUE mode.
   Confirm that pitches between the peaks of the waveform are equally spaced for 5 seconds or longer.
   The pitches are not equally spaced, perform section "4-2. Tracking Adjustment".

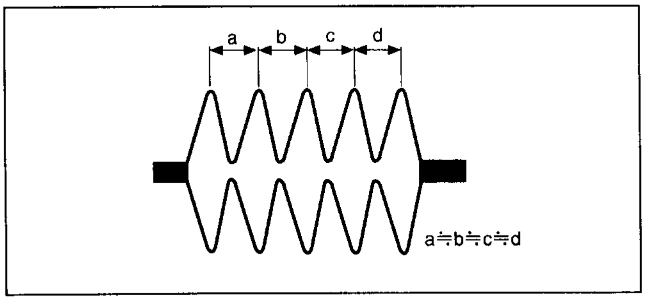


Fig. 30

4-5. Checks After Adjustments

4-5-1. Tracking Check

1) Confirm that amplitude of the RF waveform decreases to about 3/4 when the machine enters the PATH mode. (Refer to Fig. 31)
2) Confirm that the minimum amplitude (EMIN) of the RF waveform is 65 % or more of the maximum amplitude (EMAX). (Refer to Fig. 32)
3) Confirm that the RF waveform does not have too much fluctuation. (Refer to Fig. 33)

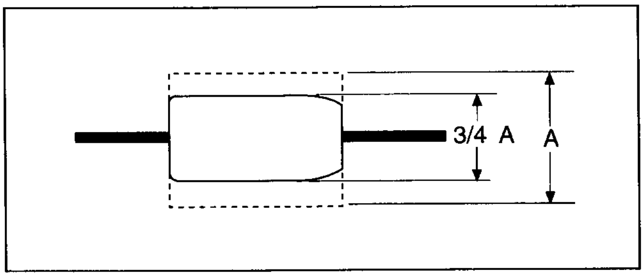


Fig. 31

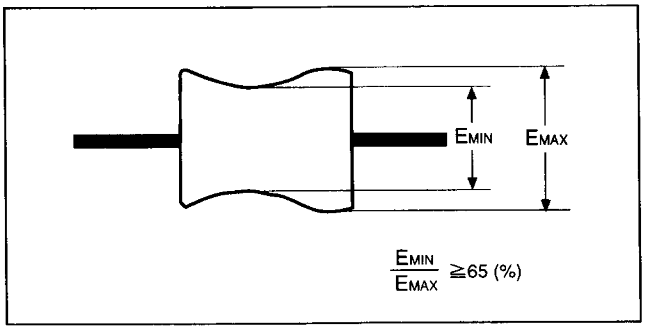


Fig. 32

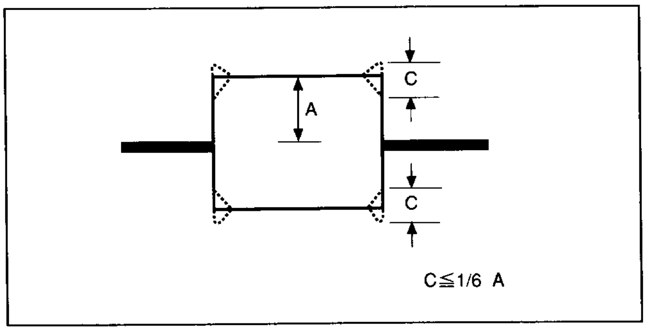


Fig. 33

4-5-2. Waveform Build-up Check (Refer to Fig. 34.)

1) Playback the tracking alignment tape.
2) Turn OFF the Track Shift mode.
3) Eject the tape once, insert and load the tape.
4) Start playing back the tape and confirm that the RF waveform builds up in three seconds with flat envelope. Confirm at this time that tape slack does not occur near pinch roller.
5) Playback the tape in CUE/REV and FF/REW modes respectively. Confirm that the RF waveform builds up in three seconds with flat envelope. Confirm at this time that tape slack does not occur near pinch roller.
6) Repeat the check items 3) to 5) again.

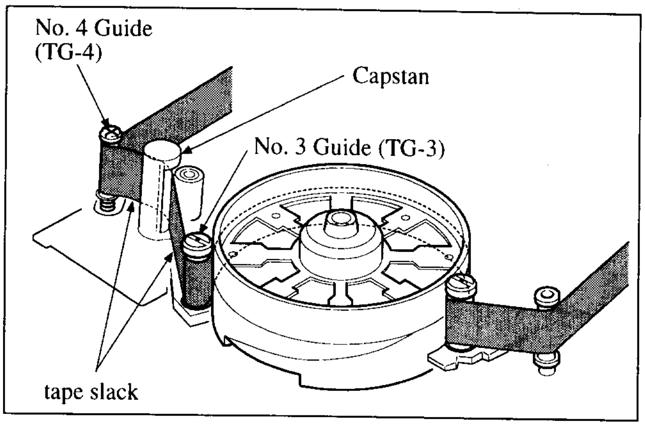


Fig. 34

4-5-3. Tape Pass Check (Refer to Fig. 35.)

1) Insert a thin video tape such as P6-120MP (NTSC) or P5-120MP (PAL). Playback the thin tape. Confirm that there is no clearance or curl of 0.3 mm or more at the following points: Upper flange of guide No. 2, upper flange of guide No. 3, upper and lower flanges of guide No. 4.
2) Confirm that there is no clearance or curl of 0.3 mm or more at each tape guide when the FF button is pressed from the playback mode to enter the CUE mode, and when the REW button is pressed from the playback mode to enter the REV mode.

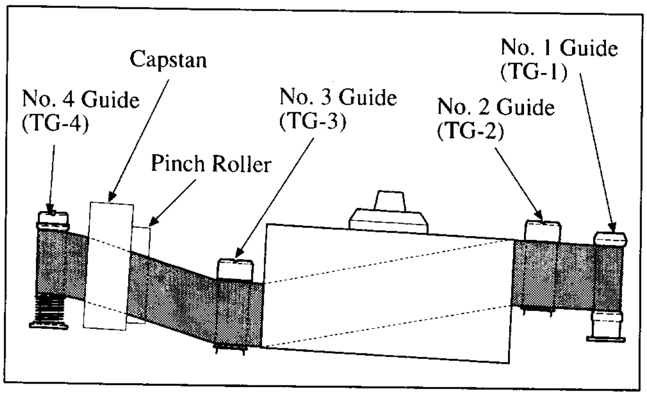
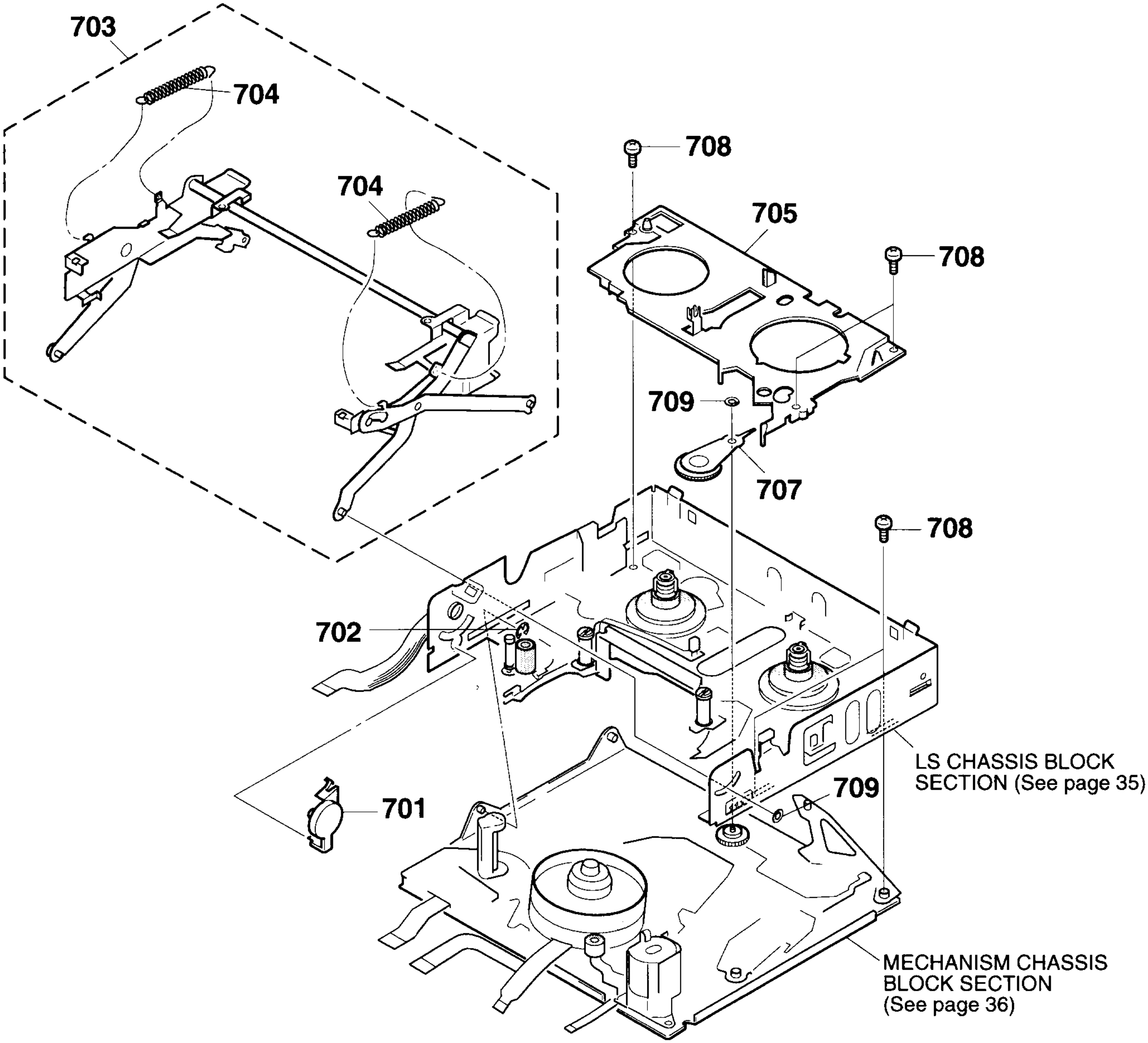


Fig. 35

5-1. Cassette Compartment Block Section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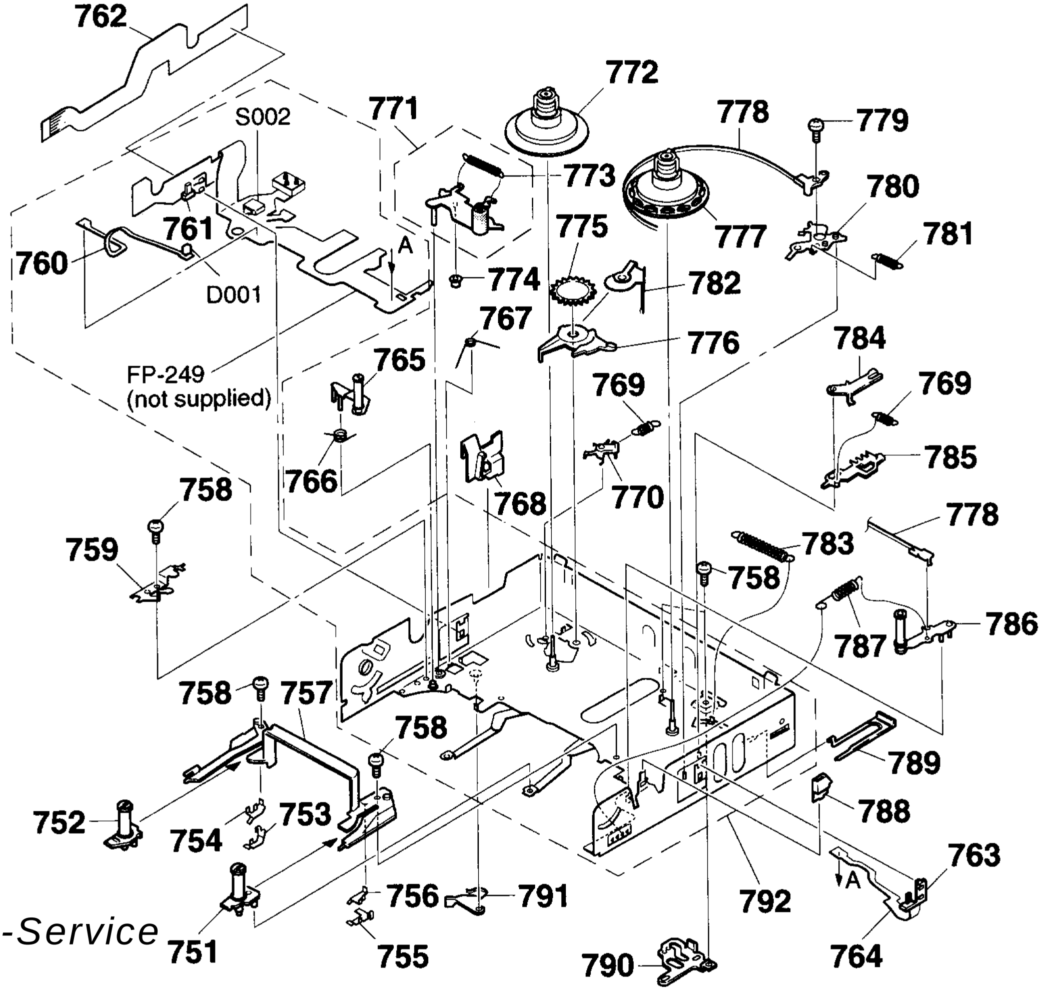
LS CHASSIS BLOCK SECTION (See page 35)
MECHANISM CHASSIS BLOCK SECTION (See page 36)

5-2. LS Chassis Block Section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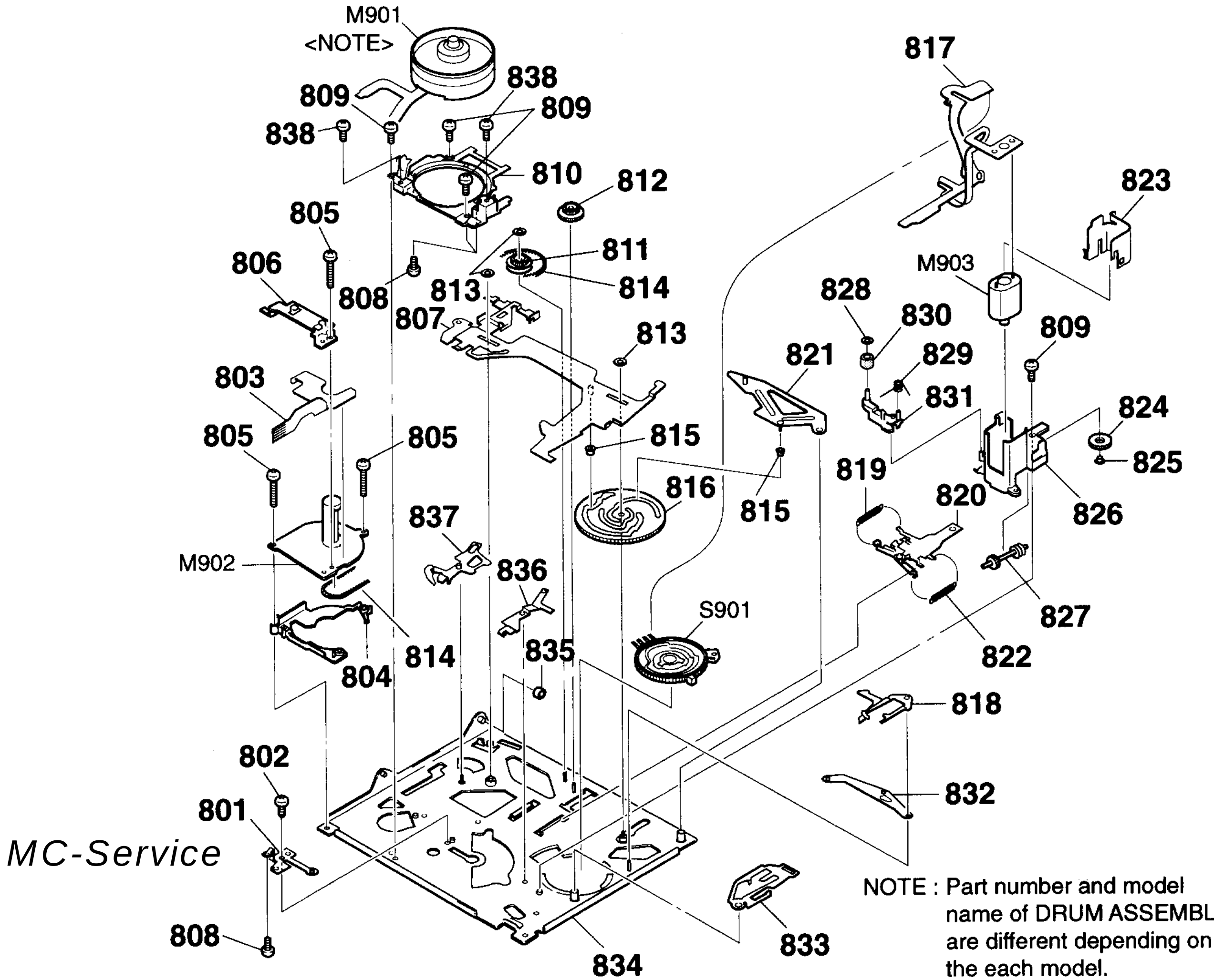
MC-Service

5-3. Mechanism Chassis Block Section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MC-Service

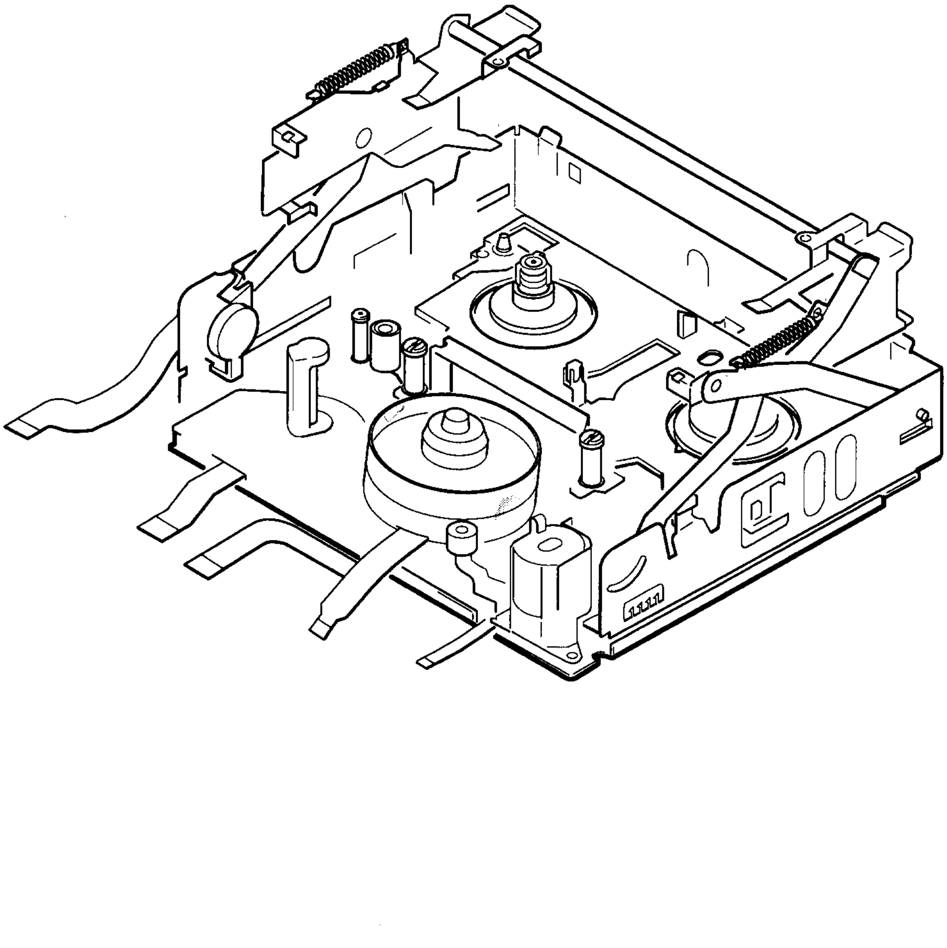
NOTE : Part number and model name of DRUM ASSEMBLY are different depending on the each model.

8mm Video MECHANICAL ADJUSTMENT MANUAL VII

B MECHANISM

Video8

Use this mechanical adjustment manual VII together with the service manual of the respective models.



MICROFILM

8 MECHANISM DECK

SONY®

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For the mode selector operation, schematic diagram and parts list, refer to the Supplement-1 Manual.

1. PREPARATION FOR CHECKING, ADJUSTING AND REPLACING THE MECHANISM

For the disassembly procedures of the cabinet and printed wiring boards, please refer to the "DISASSEMBLY" section of the service manual of the respective models.
To re-assemble the mechanical parts which are disassembled in the following sections, perform the disassembly steps in reverse, unless otherwise specified.
The mechanisms are adjusted while set in the USE mode of operation. (Refer to the "Mode Selector Operation Procedure of the Supplement-1 Manual for how to enter the USE mode.)

1-1. Cassette Compartment Block Assy

1. Disassembly Procedure (Refer to Fig. 1.)

1) Set the mechanism to USE mode.
2) Confirm that the Cassette Compartment Block Assy is opened. If it is not opened, open it referring to Fig. a.
3) Remove the claws Ⓐ and Ⓑ of the Damper Assy ① from the chassis.
4) Remove the washer ② from the shaft of the Cassette Compartment near the Drum, next to the loading motor. Remove the shaft of the arm from the slot.
5) Remove the shaft of the arm from the slot Ⓒ of the Cassette Compartment near the Drum, next to the capstan motor. (Refer to Fig. b)
6) Lift up the Cassette Compartment at the Drum side in the direction of the arrow Ⓓ, and remove the arm shaft of the Cassette Compartment from the LS Chassis ④ near the Reel Tables. Remove the Cassette Compartment Assy ③ in the direction of the arrow Ⓔ.

2. Precautions During Re-Assembling

1) After attaching the Tension Spring, confirm that the straight portion at the end of the curved hook of the spring is positioned inside the mechanism. (Refer to Fig. c)
2) Confirm that the claw in the bottom of the shaft near the Reel Table of the Cassette Compartment is hooked to the LS Chassis.
3) Confirm that the claw of the Damper Assy is hooked to the LS Chassis. (Refer to Fig. b)

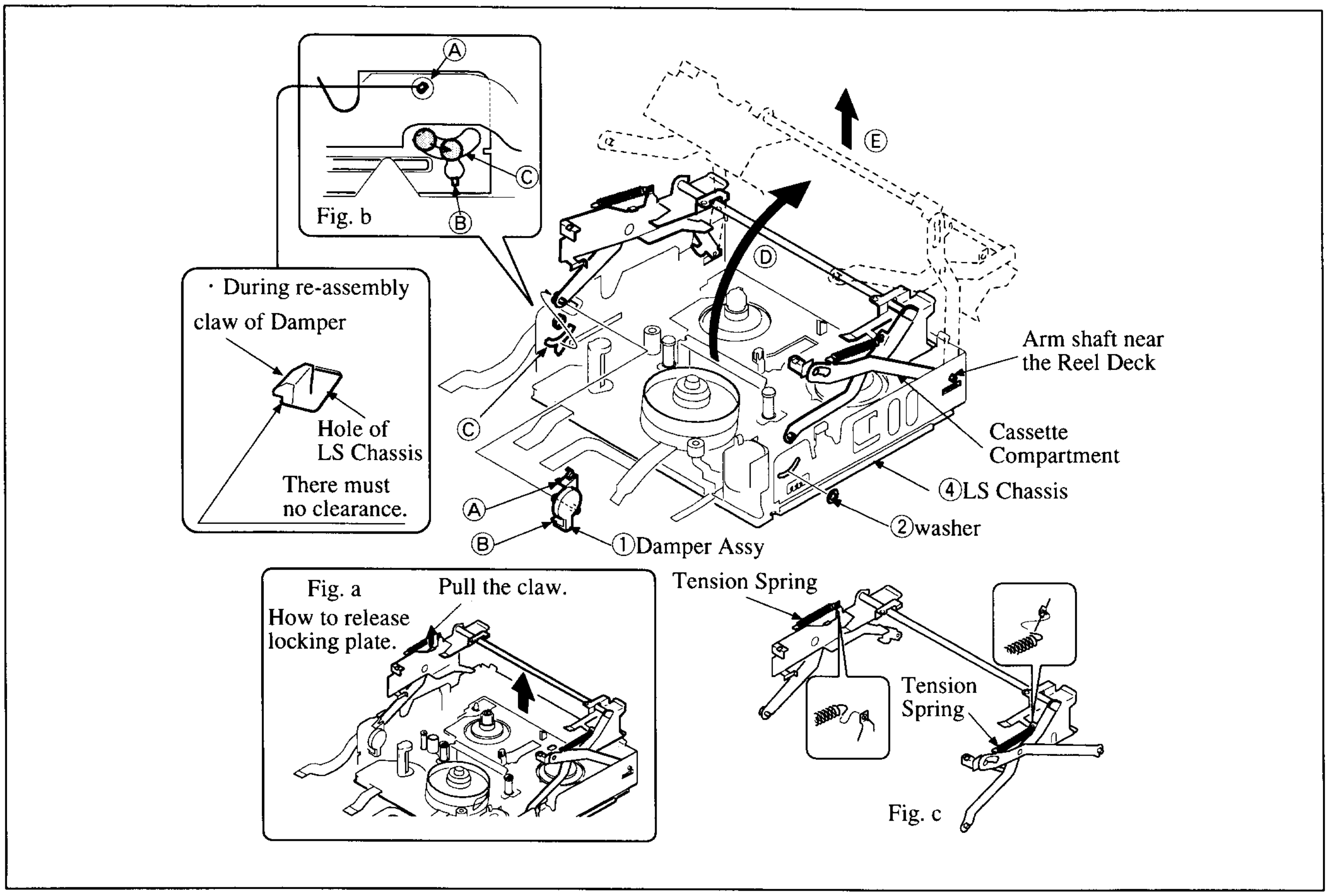

Ⓐ
Ⓒ
Fig. b
Ⓑ
· During re-assembly
claw of Damper
Hole of
LS Chassis
There must
no clearance.
Ⓔ
Ⓓ
Arm shaft near
the Reel Deck
Cassette
Compartment
Ⓒ
④LS Chassis
②washer
Ⓐ
Ⓑ
①Damper Assy
Fig. a
Pull the claw.
How to release
locking plate.
Tension Spring
Tension
Spring
Fig. c

Fig. 1

1-2. How to Operate the Mechanism with the Cassette Compartment Block Assy Removed

1. How to load a cassette tape (Refer to Fig. 2):

1) While referring to section "DISASSEMBLY" of the respective service manual, turn the main power on with the cabinet and camera section removed. (It enables to operate the mechanical deck.)
2) Connect the adjustment remote commander (Ref. No. J-10) and establish the TEST mode.

> Example of establishing the TEST mode: model CCD-TR420E/TR440E.
> Select page: 6, address: 00, set data :01 and press the PAUSE button to release protection.
> Select page: 7, address: 01, set data: 01 and press the PAUSE button.
> After tape loading or other desired operations of mechanism are completed, be sure to perform the following:
> Select page: F, address: 01, set data :00 and press the PAUSE button.
> Select page: 6, address: 00, set data: 00 and press the PAUSE button.

3) Press the push-switch ① knob in the direction of the arrow which sets the machine into loading mode.

☆ PB, FF/REW and CUE/REV operations are possible.

2. How to establish RECORD mode:

1) Press pin of the push-switch ② (ON state) and keep the ON state by fixing with adhesive tape ③.
2) Turn the main power switch ON (select VTR or CAMERA position of in case of camera).
3) Set the RECORD switch to ON.
   (When the TEST mode is selected, the rotation detection of the S and T reel tables is muted, and the top end sensor is disable which allow to run the tape.)

3. How to eject a cassette tape:

1) Press the EJECT switch to ON.

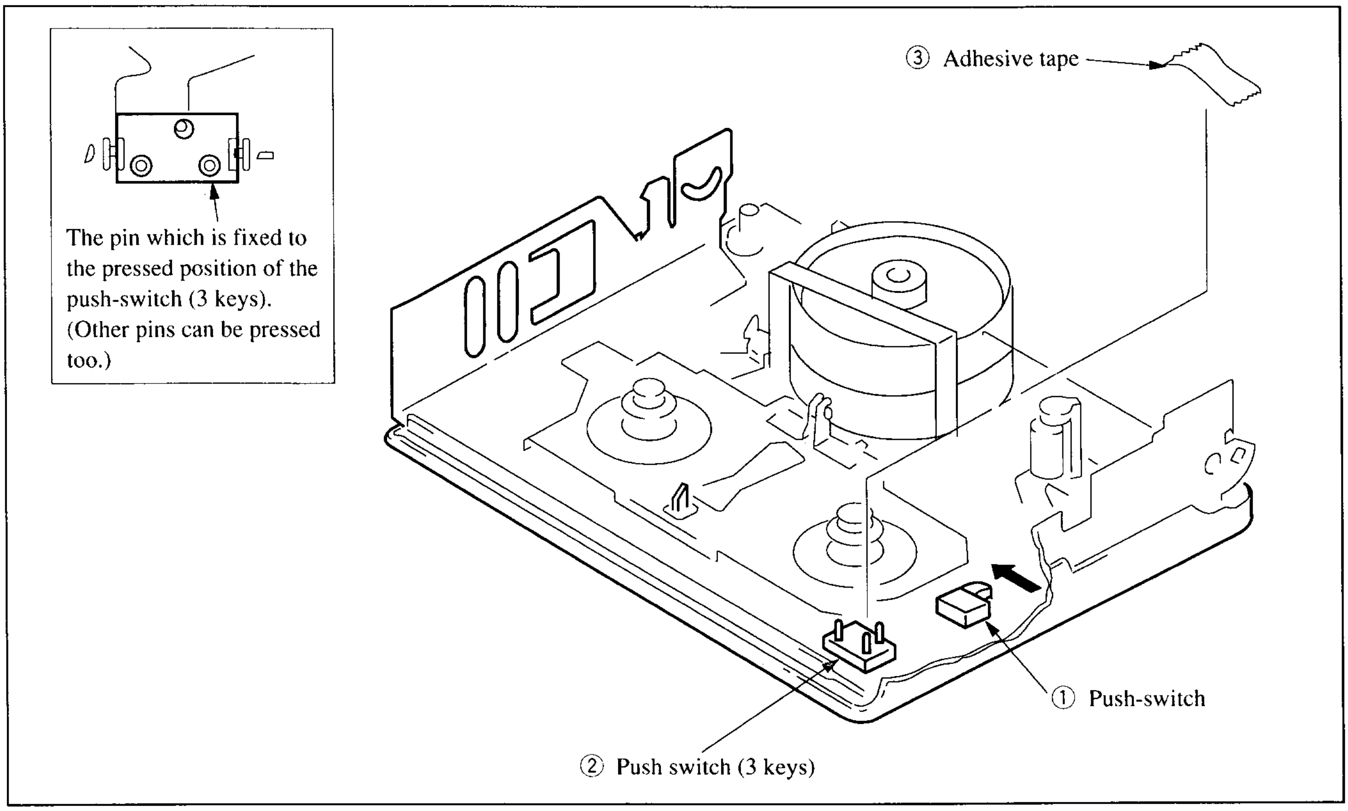

The pin which is fixed to the pressed position of the push-switch (3 keys). (Other pins can be pressed too.)
③ Adhesive tape
① Push-switch
② Push switch (3 keys)

Fig. 2

2. PERIODIC CHECK AND MAINTENANCE ITEMS

- Perform the following periodic check and maintenance to ensure that the machine functions continue to operate in peak condition, and to protect the tape and mechanism deck. After completing repair work, perform the following maintenance items regardless of how long the user's machine has been used.

2-1. Rotary Drum Assy Cleaning

Press the cleaning piece (Ref. No. J-2) moistened with cleaning fluid (Ref. No. J-1) lightly on the Rotary Drum Assy. Gently turn the Rotary Drum Assy slowly by hand counter-clockwise to clean the rotary drum.

Caution: Never attempt to turn the head drum motor by turning the main power ON. Also, never turn the drum clockwise by hand. In addition, never move the cleaning piece vertically with respect to the head tips, since this will damage them. Never clean the head drum in any way other than as described above.

2-2. Tape Path Cleaning (Refer to Fig. 3.)

1) Set the mechanism to USE mode. Clean the tape path system (TG-1, TG-2, TG-3, TG-4, pinch roller, capstan shaft) and lower drum using a very thin cotton swab (Ref. No. J-3) moistened with cleaning fluid.

Caution: Take care that the very thin cotton swab (Ref. No. J-3) does not touch the oil or grease of the various link mechanisms.

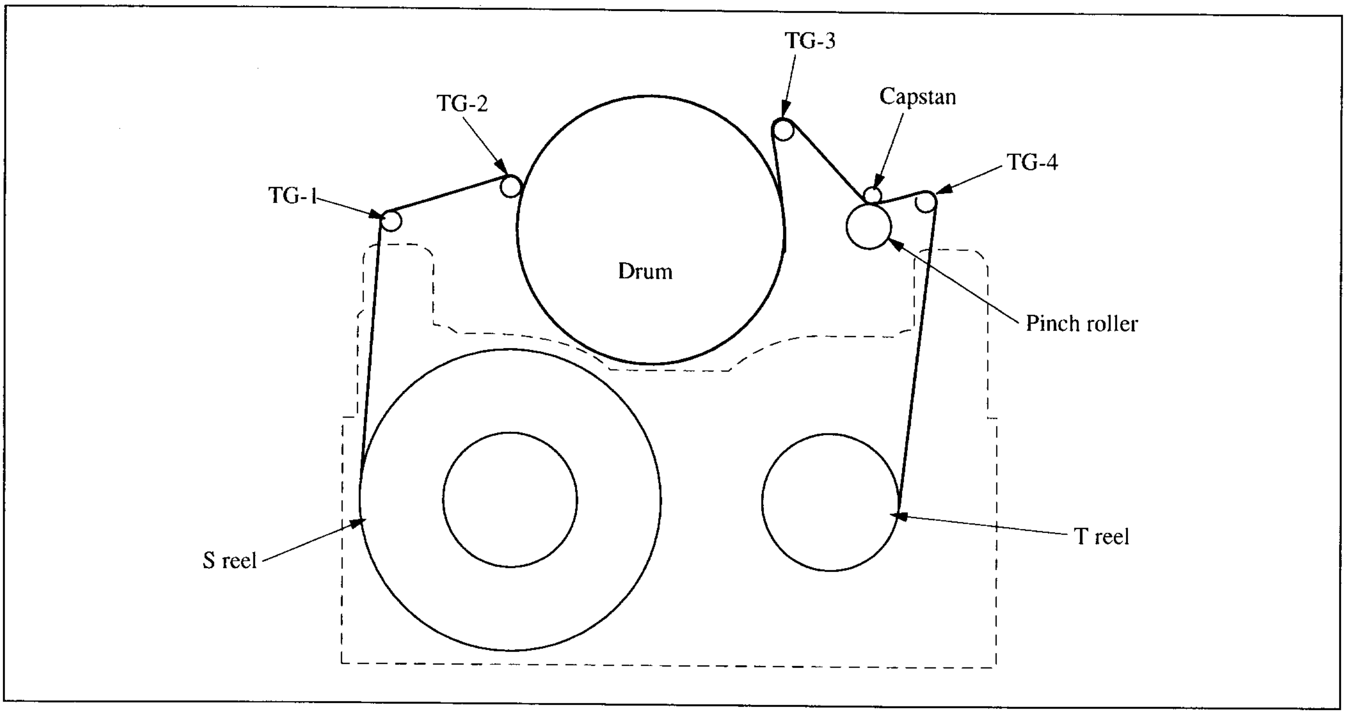


Fig. 3

2-3. Periodic Check Items

Maintenance and Inspection Points		Operating Hours										Remarks
		500	1000	1500	2000	2500	3000	3500	4000	4500	5000	
	Cleaning of tape running surface	○	○	○	○	○	○	○	○	○	○	Take care not to get oily.
	Cleaning and degaussing of Rotary Drum Assy	○	○	○	○	○	○	○	○	○	○	Take care not to get oily.
Drive System	Timing Belt	—	☆	—	☆	—	☆	—	☆	—	☆	3-965-546-01
	Capstan Shaft	—	◎	—	◎	—	◎	—	◎	—	◎	Take great care not to let any oil contact the tape running surface.
	Change Gear Shaft Relay Pulley Shaft	—	◎	—	◎	—	◎	—	◎	—	◎	
	Loading Motor	—	☆	—	☆	—	☆	—	☆	—	☆	X-3945-401-1
Performance Check	Abnormal Sound	☆	☆	☆	☆	☆	☆	☆	☆	☆	☆	
	Tape Hold-back Tension Measurement	—	☆	—	☆	—	☆	—	☆	—	☆	
	Brake System	—	☆	—	☆	—	☆	—	☆	—	☆	
	FWD } Torque RVS } Measurement	—	☆	—	☆	—	☆	—	☆	—	☆	

○Cleaning ◎Lubrication ☆Check

Note: When overhauling the machine, replace the parts while referring to the above table.

Note: Regarding oil

- Be sure to use the specified oil. (If the viscosity and other characteristics are different, various troubles may arise.)
  Oil: Sony part No. 7-661-018-18
  (Mitsubishi diamond oil hydro fluid NT-68)
- For the oil lubricated bearings, use oil free from dust or foreign materials. If the oil contains any dust or foreign material, the bearings will wear out quickly or burn out.
- One drop of oil is the amount of oil which forms at the tip of a stick of 2 mm diameter.

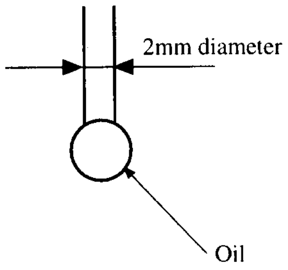


Fig. 4

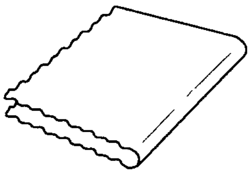
2-4. Service Tool List

Ref. No.	Name	Parts Code	Tool Stamp	Applications
J-1	Cleaning fluid	Y-2031-001-0	——	
J-2	Cleaning piece	2-034-697-00	——	
J-3	Very thin cotton swab (made by Nippon Cotton Swab Inc. (P752D))		——	
J-4	Head demagnetizer	Commercially available	——	
J-5	Dental mirror Spare mirror	J-6080-029-A J-6080-030-1	SL-5052	Tape path
J-6	Alignment tape (NTSC : WR5-1NP) (PAL : WR5-1CP)	8-967-995-02 8-967-995-07	——	Tape path
J-7	FWD/RVS take-up torque cassette	J-6080-824A	GD-2086	
J-8	Screwdriver for tape path adjustment	J-6082-026-A	——	For tape guide adjustment
J-9	FWD/BACK tension adjustment screwdriver	J-6082-187-A	——	
J-10	Remote commander for adjustment	J-6082-053-B	——	Tape path (Setting PATH mode)
J-11	MD process table	J-6082-166-A	——	
J-12	FLOIL Grease SG-941	7-662-001-39	——	
J-13	FLOIL Grease SG-055G	7-651-000-09	——	

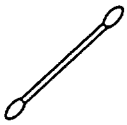
Other equipment
- Oscilloscope
- Analog circuit tester (input impedance 20 kΩ)

J-1

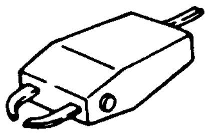
J-2



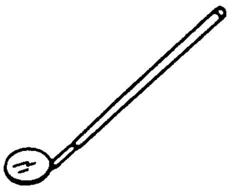
J-3



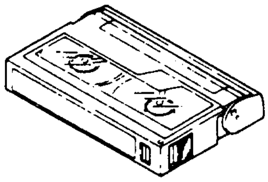
J-4



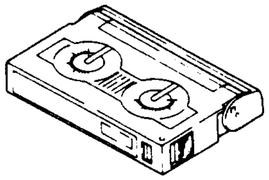
J-5



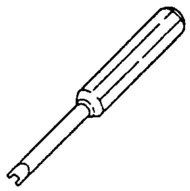
J-6



J-7



J-8



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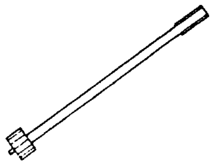
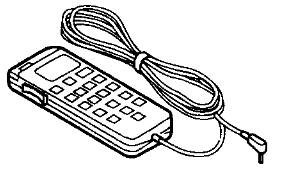
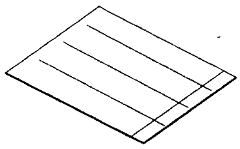


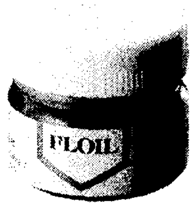
J-10



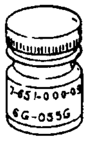
J-11



J-12



J-13



3. CHECKING, ADJUSTING AND REPLACING THE MECHANISM

3-1. HC Roller Block Assy (Refer to Fig. 5)

1. Disassembly Procedure

1) Remove the Torsion Spring ① from the cut-out Ⓐ of the motor holder. Hook it to the claw Ⓑ of the HC Arm.
2) Remove the HC Roller Block Assy in the direction shown by Ⓒ.
3) Remove the stop washer ② and remove the HC Roller Block Assy ③.

2. Precautions During Re-Assembly

1) After attaching the HC Roller Block Assy, confirm that both ends of the torsion spring are hooked to Ⓐ and Ⓓ.
2) Align the block so that the cut-out Ⓔ agrees with the rib Ⓕ.

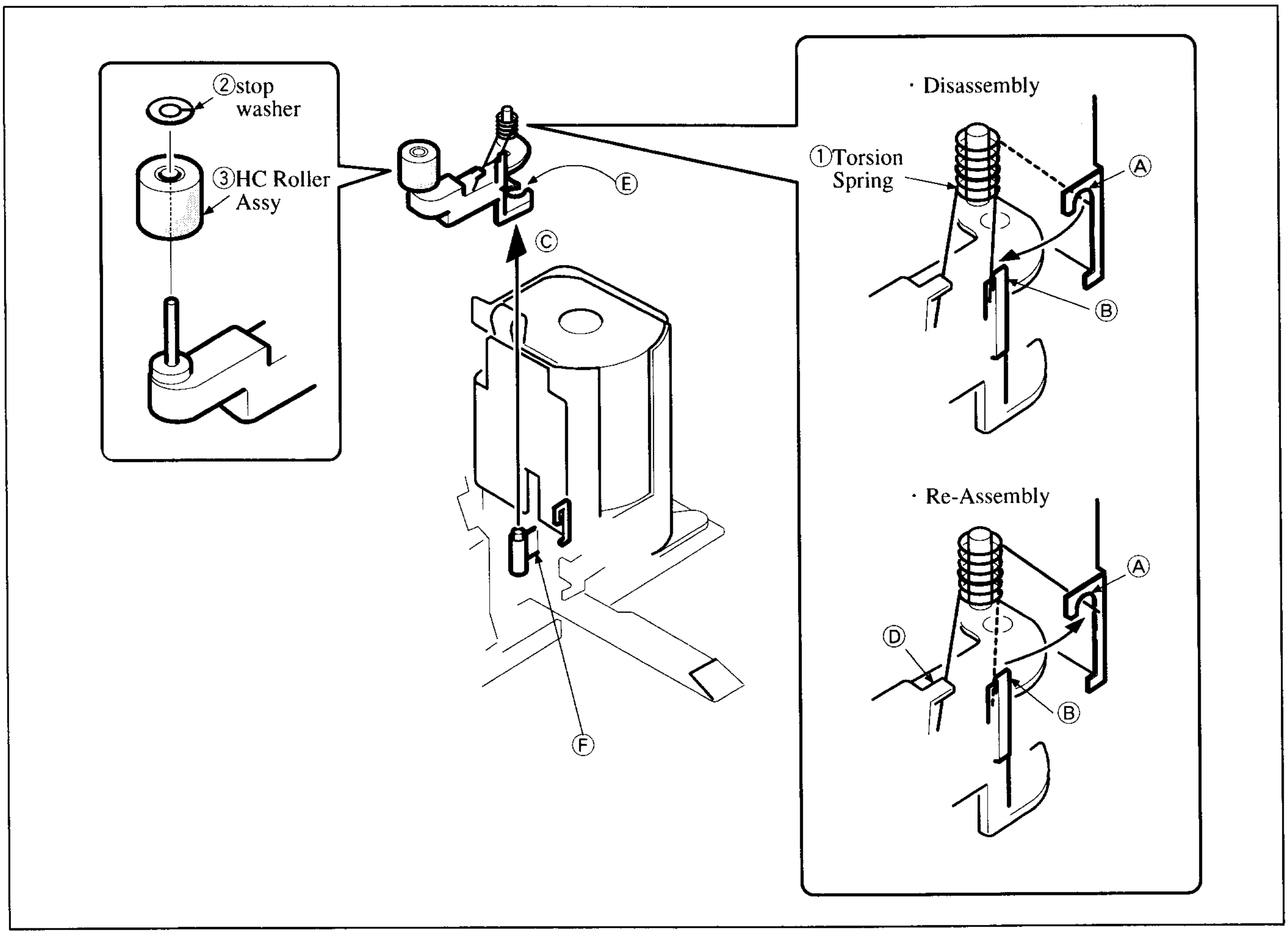

②stop washer
③HC Roller Assy
Ⓔ
Ⓒ
Ⓕ
· Disassembly
①Torsion Spring
Ⓐ
Ⓑ
· Re-Assembly
Ⓓ
Ⓐ
Ⓑ

Fig. 5

3-2. Drum Assy (Refer to Fig. 6)

1. Disassembly Procedure

1) Set the mechanism to $\boxed{\text{USE}}$ mode.
2) Remove the three screws (M 1.4) ① and remove the Drum Assy ②.

Caution: Be careful not to touch the outer circumference of the drum. (Hold the portions Ⓐ and Ⓑ of the drum assy.)

2. Precautions During Re-Assembly

1) Be careful not to touch the outer circumference of the drum. (Hold the portions Ⓐ and Ⓑ of the drum assy.)
2) When tightening the three screws (M 1.4), tighten them in the order Ⓒ, then Ⓓ, then Ⓔ.
3) After attaching the Drum Assy, perform the steps in section "4. TAPE PATH ADJUSTMENT".

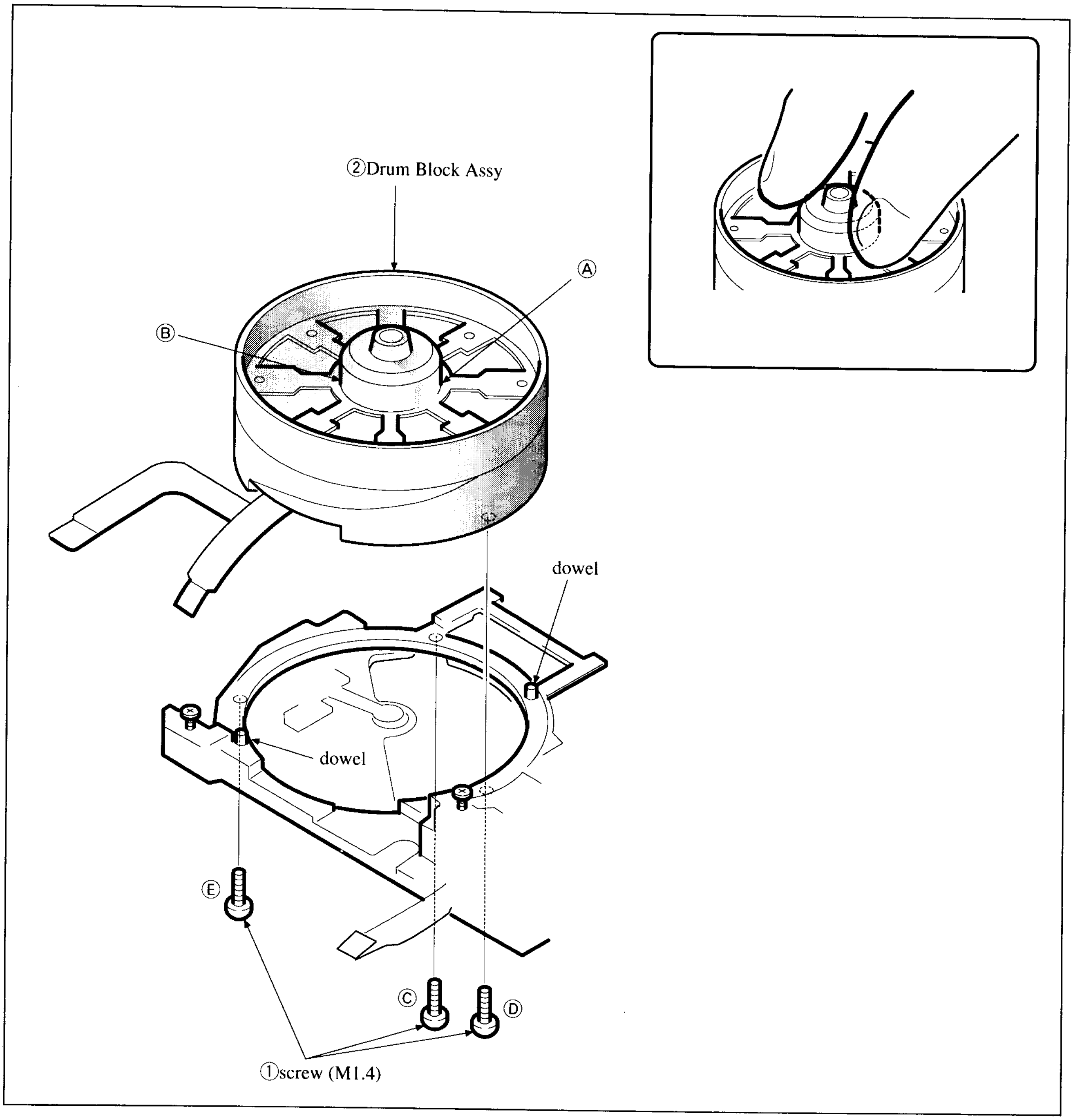


Fig. 6

3-3. Drum Base Block Assy, Shaft Ground (Refer to Fig. 7)

1. Disassembly Procedure

1) Remove the Drum Assy referring to section 3-2.
2) Remove the three screws (M 1.4×2.5) ① and remove the Drum Base Block Assy ②.
3) Remove the screw (M 1.7×1.4) ③ and remove the Shaft Ground ④.

Caution 1: Do not hold the spring portion of the Shaft Ground ④.

Caution 2: The loading motor can be removed while the mechanism is in this state. However, do not move any other mechanical parts (especially gears and cams around the rotary switch) when removing the loading motor. (Refer to 3-11.)

2. Precautions During Re-Assembly

1) Do not touch the spring portion of the Shaft Ground ④.
2) When tightening the three screws (M 1.4×2.5), tighten them in the order of Ⓐ, then Ⓑ, then Ⓒ.
3) After re-assembly is completed, perform the steps in section "4. TAPE PATH ADJUSTMENT".

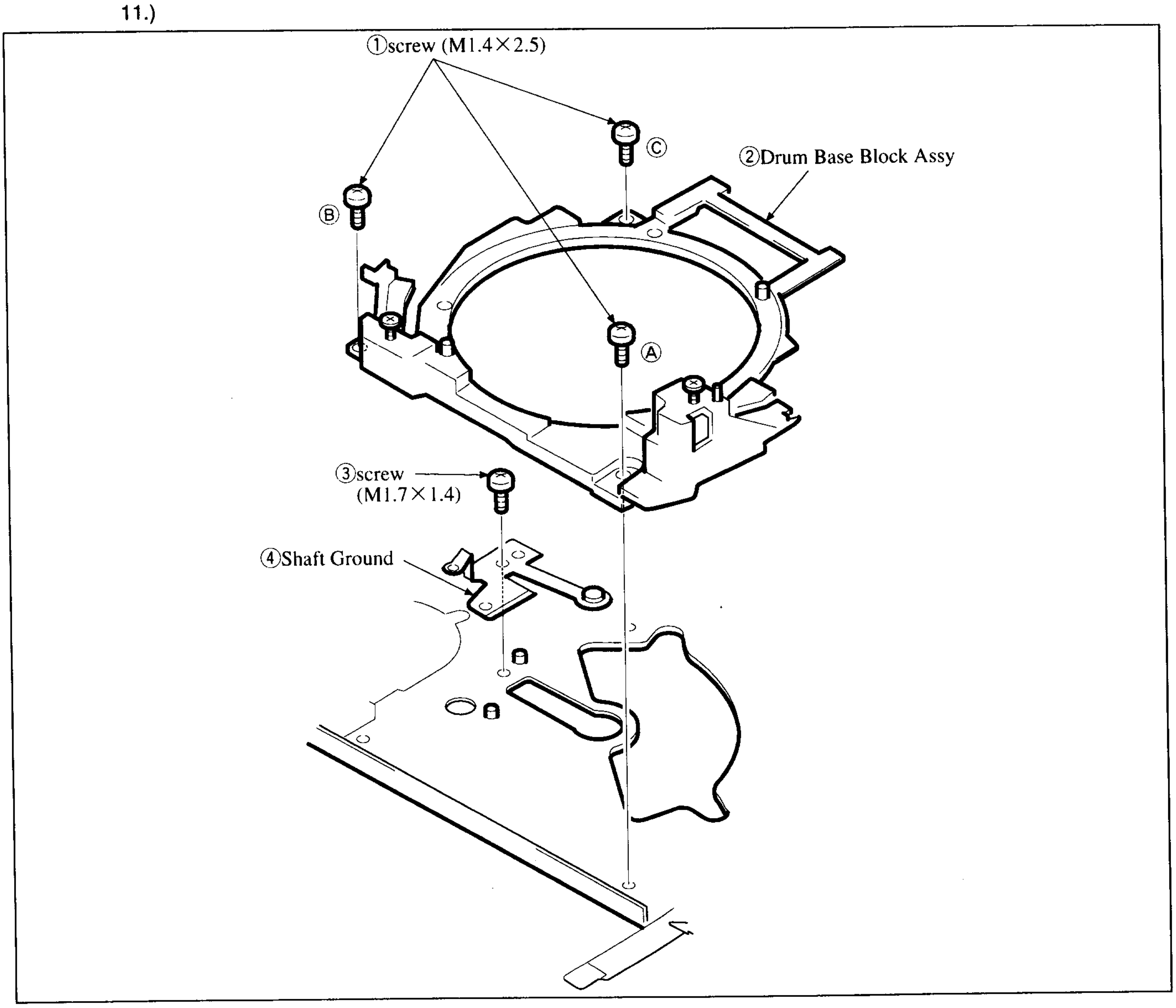


Fig. 7

3-4. Gooseneck Retainer, Gooseneck Gear Assy (Refer to Fig. 8)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the LED ① from the LED holder of the Gooseneck Retainer ③.
   (Turn the flexible board 90° outside and remove it upward.)
3) Remove the three screws (M 1.4×2.5) ② and remove the Gooseneck Retainer ③.
4) Remove the stop washer ④ and remove the Gooseneck Gear Assy ⑤.

2. Precautions During Re-Assembly

1) When attaching the Gooseneck Retainer ③, take care that the Gooseneck Retainer ③ does not collide with the tension regulator band. (The tension regulator band must be located inside.)
2) Hook the T-side claw on the guide.

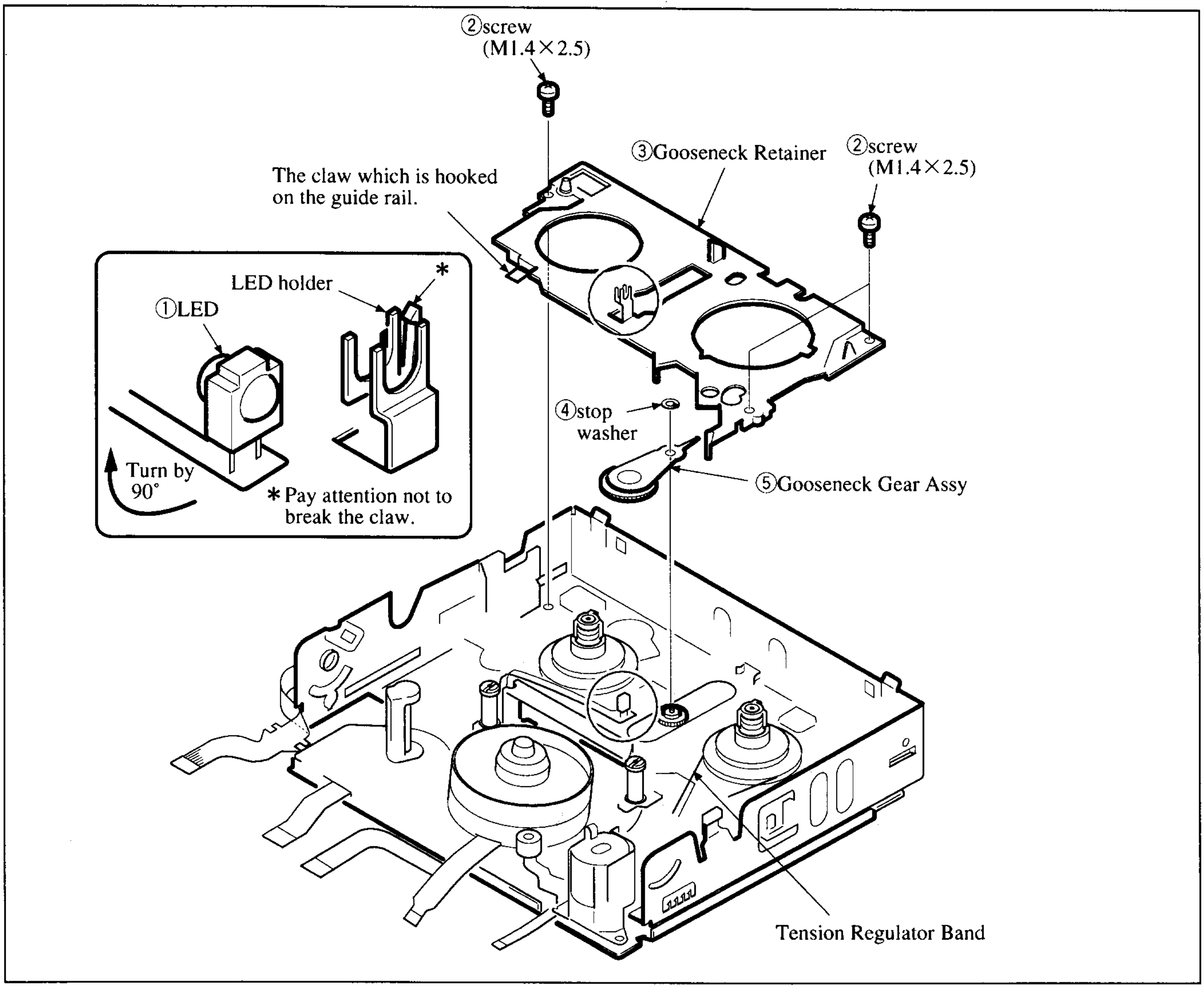

②screw (M1.4×2.5)
③Gooseneck Retainer
②screw (M1.4×2.5)
The claw which is hooked on the guide rail.
LED holder
*
①LED
Turn by 90°
* Pay attention not to break the claw.
④stop washer
⑤Gooseneck Gear Assy
Tension Regulator Band

Fig. 8

3-5. LS Chassis Block Assy, Mechanical Chassis Block Assy (Refer to Fig. 9)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the FP-221 flexible board ① from the flexible board holder.
4) Remove the stop ring E1.5 ②.
5) Remove the two screws (M 1.4×2.5) ③ and remove the LS Chassis Block Assy ④ from the Mechanical Chassis Block ⑤ in the direction of the arrow Ⓐ.

Note: The Tension Regulator Plate (2) can easily fall into the Mechanical Chassis Block Assy. Take care not to drop it.

2. Precautions During Re-Assembly

1) Before attaching the LS Chassis Block Assy, confirm that the respective phase-determining holes have been adjusted for correct phase. Also confirm that the specified locations of the Mechanical Chassis Block Assy and the LS Chassis Block Assy are coated with grease SG-055G (Ref. No. J-13). (Refer to Fig. a)
2) When attaching the LS Chassis Block Assy, insert the LS Cam Plate (on the LS chassis side) into the dowel (on the mechanical chassis side). Also insert the TG1 Cam Axis (on the LS chassis side) into the Tension Regulator Plate (2) (on the mechanical chassis side).
3) When attaching these block assemblies, attach them while pressing the TG-1 Arm Assy in the direction toward the TG-2 Guide. (Refer to Fig. b)
4) Pay attention that the TG-1 Arm is not floated.

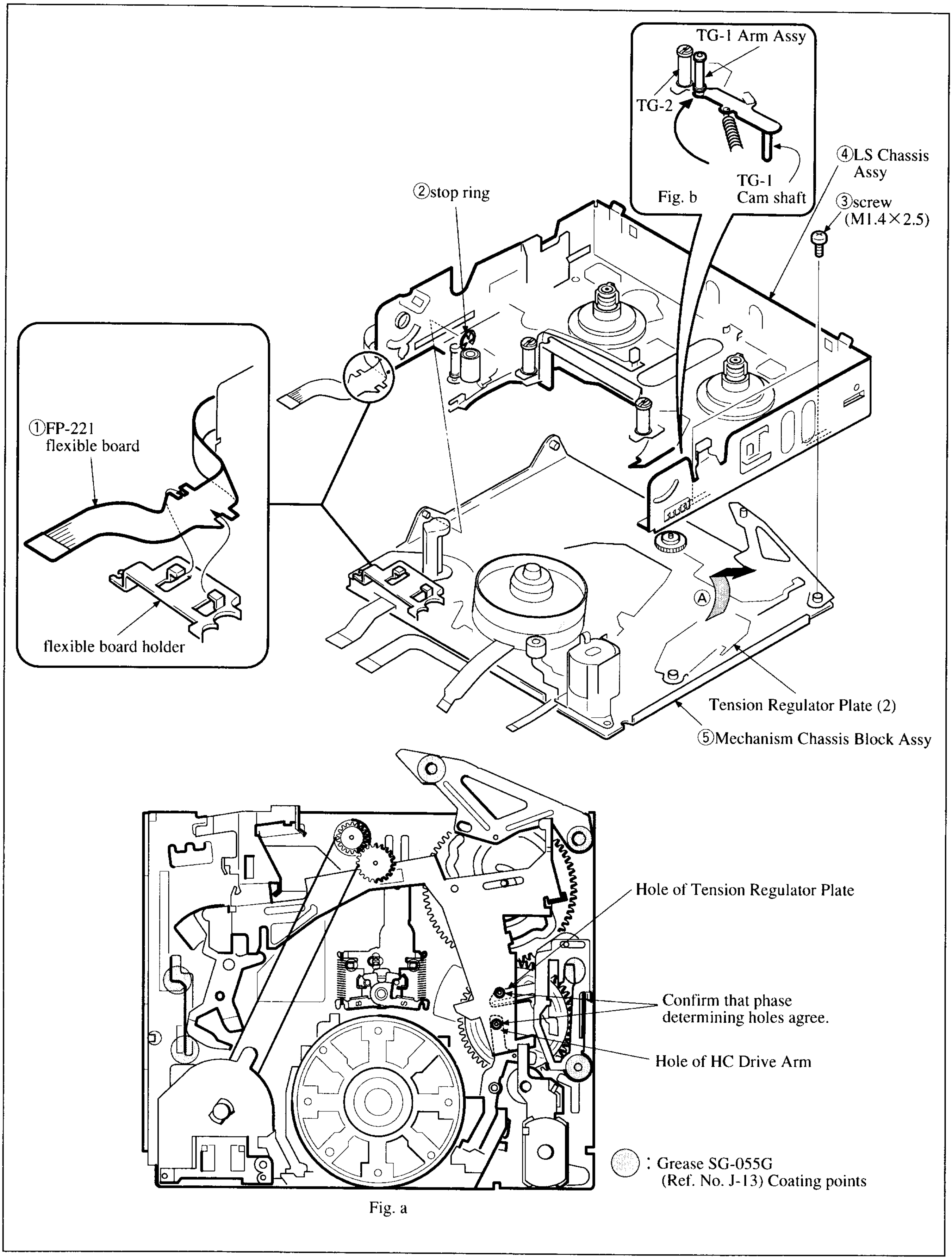

TG-1 Arm Assy
TG-2
TG-1
Cam shaft
④LS Chassis Assy
③screw (M1.4×2.5)
②stop ring
①FP-221 flexible board
flexible board holder
Ⓐ
Tension Regulator Plate (2)
⑤Mechanism Chassis Block Assy
Hole of Tension Regulator Plate
Confirm that phase determining holes agree.
Hole of HC Drive Arm
: Grease SG-055G (Ref. No. J-13) Coating points

Fig. b

Fig. a

Fig. 9

- **PARTS CONSTITUTING THE LS CHASSIS.**

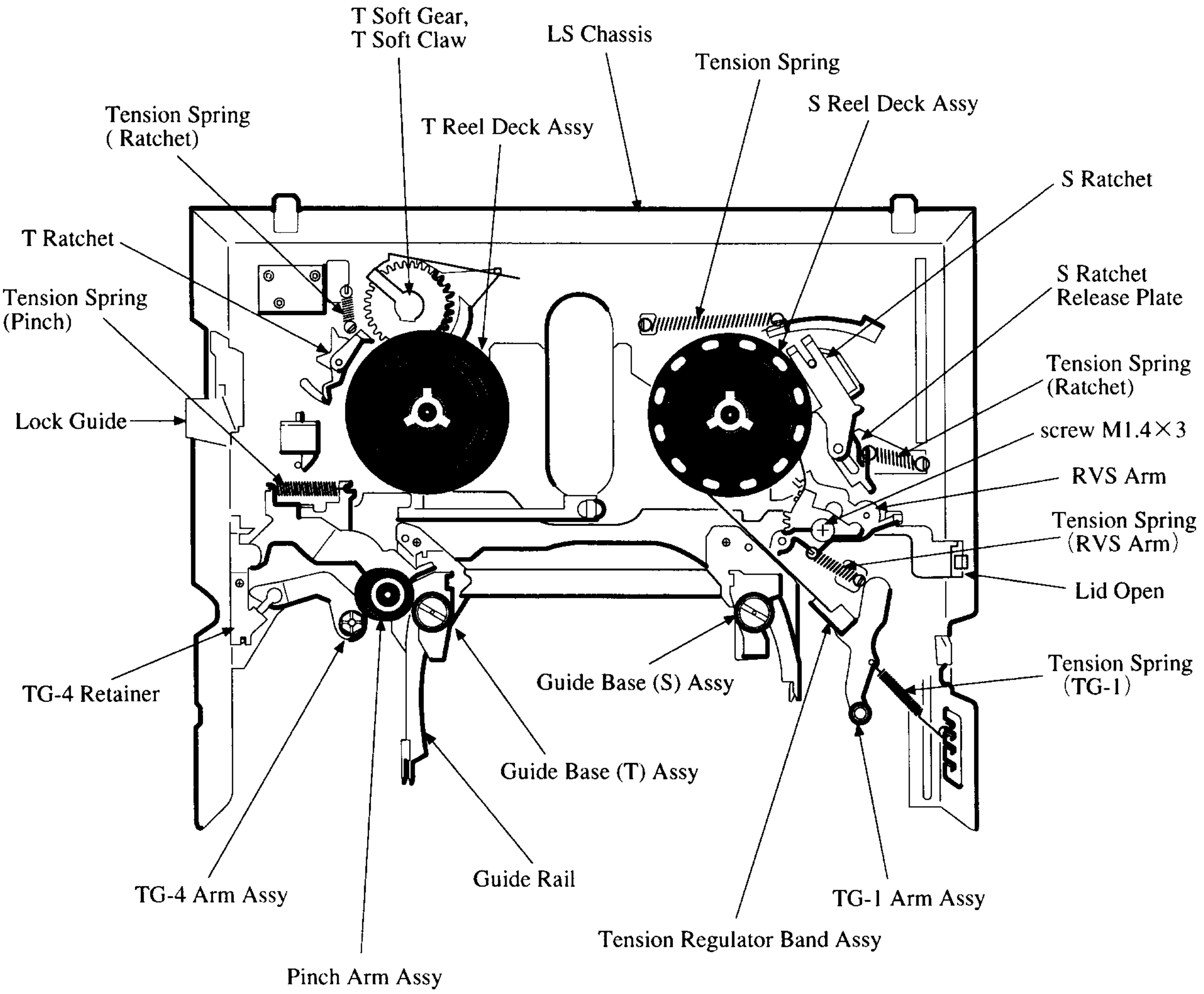

T Soft Gear,
T Soft Claw
LS Chassis
Tension Spring
Tension Spring
(Ratchet)
T Reel Deck Assy
S Reel Deck Assy
S Ratchet
T Ratchet
Tension Spring
(Pinch)
S Ratchet
Release Plate
Tension Spring
(Ratchet)
Lock Guide
screw M1.4×3
RVS Arm
Tension Spring
(RVS Arm)
Lid Open
Tension Spring
(TG-1)
TG-4 Retainer
Guide Base (S) Assy
Guide Base (T) Assy
Guide Rail
TG-4 Arm Assy
TG-1 Arm Assy
Tension Regulator Band Assy
Pinch Arm Assy

Fig. 10

3-6. T Reel Table Assy, T Ratchet, T Soft Gear Block Assy (Refer to Fig. 11)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the claw of the T Reel Deck Assy ① from the chassis and remove the T Reel Deck Assy from its shaft.
4) Remove the Tension Spring (Ratchet) ② from the LS Chassis and turn the T Ratchet ③ in the direction of the arrow Ⓐ and remove it .
5) Turn the T Soft Gear Block Assy ④ in the direction of the arrow Ⓑ and remove it .

2. Precautions During Re-Assembly

1) Confirm that the protrusions of both the T Soft Gear Block Assy and T Ratchet are securely locked to the LS Chassis.
2) Be careful not to deform the claw.

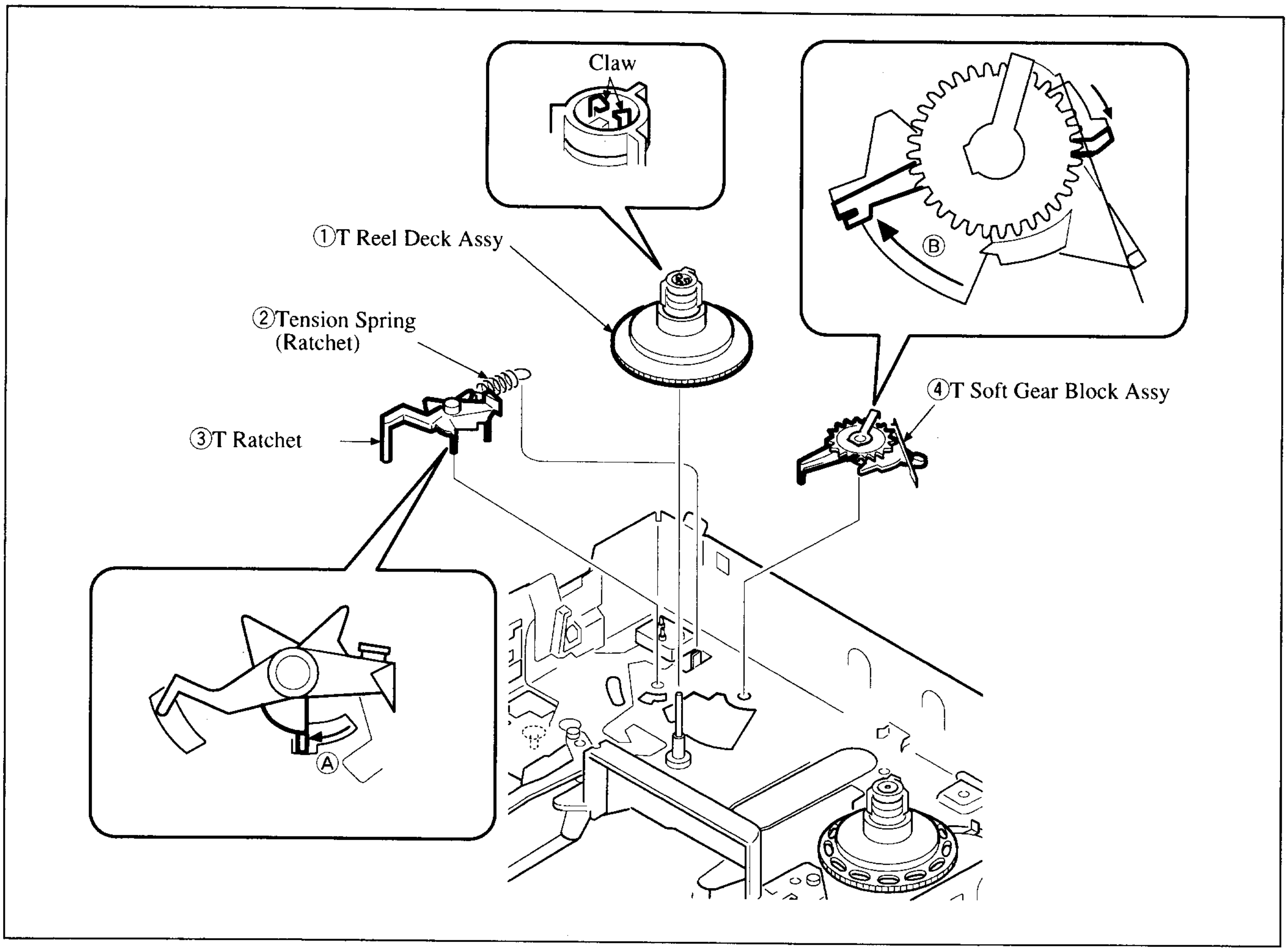


Fig. 11

3-7. Tension Regulator Band Assy, TG1 Arm Assy, S Reel Table Assy, S Ratchet, S Ratchet Release Plate, RVS Arm (Refer to Fig. 12)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the Tension Spring (TG1) ① from the LS Chassis.
4) Remove the screw (M 1.4×3) ② and remove the Tension Adjustment Block of the Tension Regulator Band Assy ④ form RVS Arm.
5) Release the S Ratchet ⑥ in the direction of the arrow Ⓐ and remove the Tension Regulator Band (while taking care not to bend the band) from the S Reel.
6) Remove the TG1 Arm Assy ③ from the LS Chassis, then remove the claw of the Tension Regulator Band Assy ④. (Refer to Fig. a)
7) Remove the claw of the S Reel Deck Assy ⑤ from the chassis and remove the S Reel Deck Assy from its shaft.
8) Remove the S Ratchet ⑥. (Because it is press-fitted, insert tip of screwdriver into the center of rotation and remove it.
9) Remove the Tension Spring (ratchet) ⑦ from the LS Chassis and remove the S Ratchet Release Plate ⑧.
10) Remove the Tension Spring ⑨ from the LS Chassis and remove the RVS Arm ⑩ by turning it..

2. Precautions During Re-Assembly

1) Confirm that the dowel of the S Ratchet Release Plate is inserted into the groove of the S ratchet and confirm that the center of the ratchet is press-fitted into bottom of the shaft. (It can be used again.)
2) When attaching the Tension Regulator Band Assy, take care not to bend it.
3) Pay attention that oil or grease is not spit on the surface of the Tension Regulated Band. (Pay attention also not to touch it with hand directly.)
4) Confirm that the tension regulator band is correctly inserted into the groove of the S Reel Deck Assy ⑤. (Refer to Fig. b)
5) When securing the Tension Adjustment Block using the screw, press it toward the position which gives the least tension, then tighten the fixing screw.
6) Before attaching the TG1 Arm Assy, coat the LS Chassis TG1 boss with oil (1/2 drop).
7) Do not touch the tape guide of the TG1 Arm Assy with bare hands.
8) Confirm that the claw of the S Reel Deck Assy is not deformed.

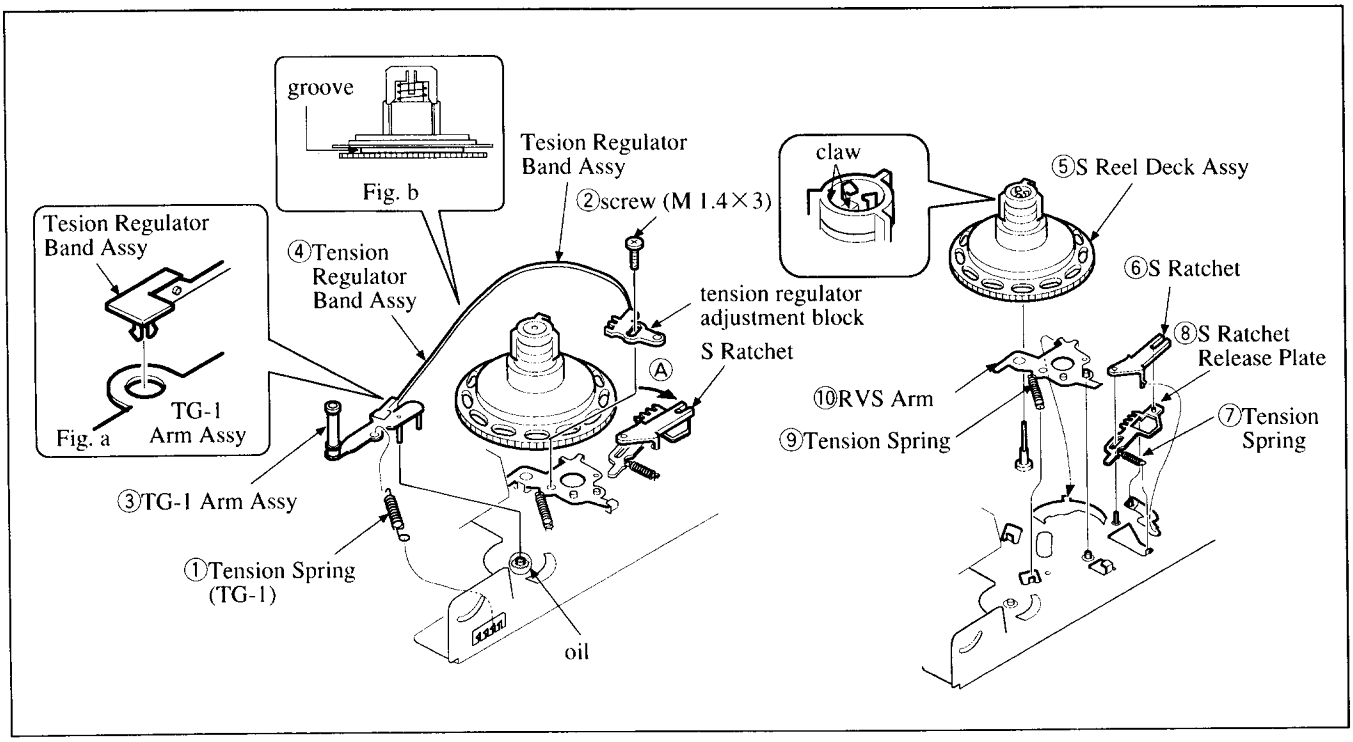

groove
Fig. b
Tesion Regulator Band Assy
②screw (M 1.4×3)
claw
⑤S Reel Deck Assy
Tesion Regulator Band Assy
④Tension Regulator Band Assy
⑥S Ratchet
tension regulator adjustment block
S Ratchet
Ⓐ
⑧S Ratchet Release Plate
⑩RVS Arm
⑨Tension Spring
⑦Tension Spring
TG-1 Arm Assy
Fig. a
③TG-1 Arm Assy
①Tension Spring (TG-1)
oil

Fig. 12

3-8. Pinch Arm Assy, TG4 Arm Block Assy (Refer to Fig. 13)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the LS Chassis Block Assy referring to section 3-5.
4) Remove the Torsion Spring (pinch) ① from an end of Pinch Arm and hook it on the cut-out Ⓐ of the LS Chassis.
5) Remove the screw (M 1.4×2.5) ② and remove the TG4 Retainer ③.
6) Remove the TG4 Arm Block Assy ④ and remove the Torsion Spring ⑤ while paying attention to the Torsion Spring ⑤.
7) Remove the Pinch Arm Assy ⑥. (Caution: The Pinch Press Roller is easy to drop. Pay attention not to drop it.)
8) Remove the Torsion Spring (pinch) ① from the cut-out of the LS Chassis in the order of Ⓐ then Ⓑ.

2. Precautions During Re-Assembly

1) Before attaching these parts, coat the LS chassis pinch arm boss and TG4 arm boss with grease SG-055G (Ref. No. J-13).
2) Do not touch the tape guide of the TG4 Arm Block Assy and roller of the Pinch Arm Assy with bare hand.
3) After coating the Pinch Press Shaft of the Pinch Arm Assy ③ with grease SG-055G (Ref. No. J-13), attach the Pinch Press Roller.

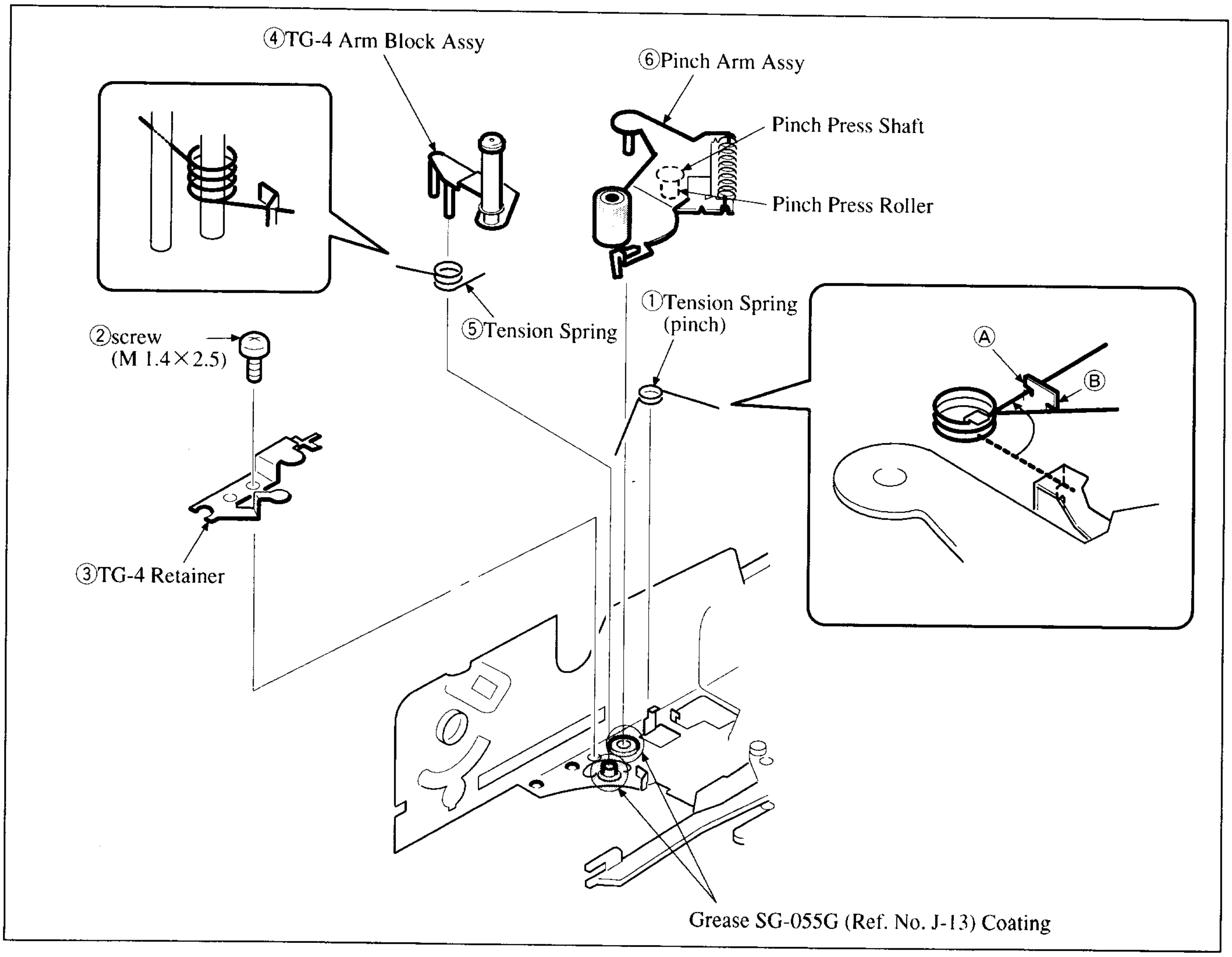

④TG-4 Arm Block Assy
⑥Pinch Arm Assy
Pinch Press Shaft
Pinch Press Roller
②screw (M 1.4×2.5)
⑤Tension Spring
①Tension Spring (pinch)
Ⓐ
Ⓑ
③TG-4 Retainer
Grease SG-055G (Ref. No. J-13) Coating

Fig. 13

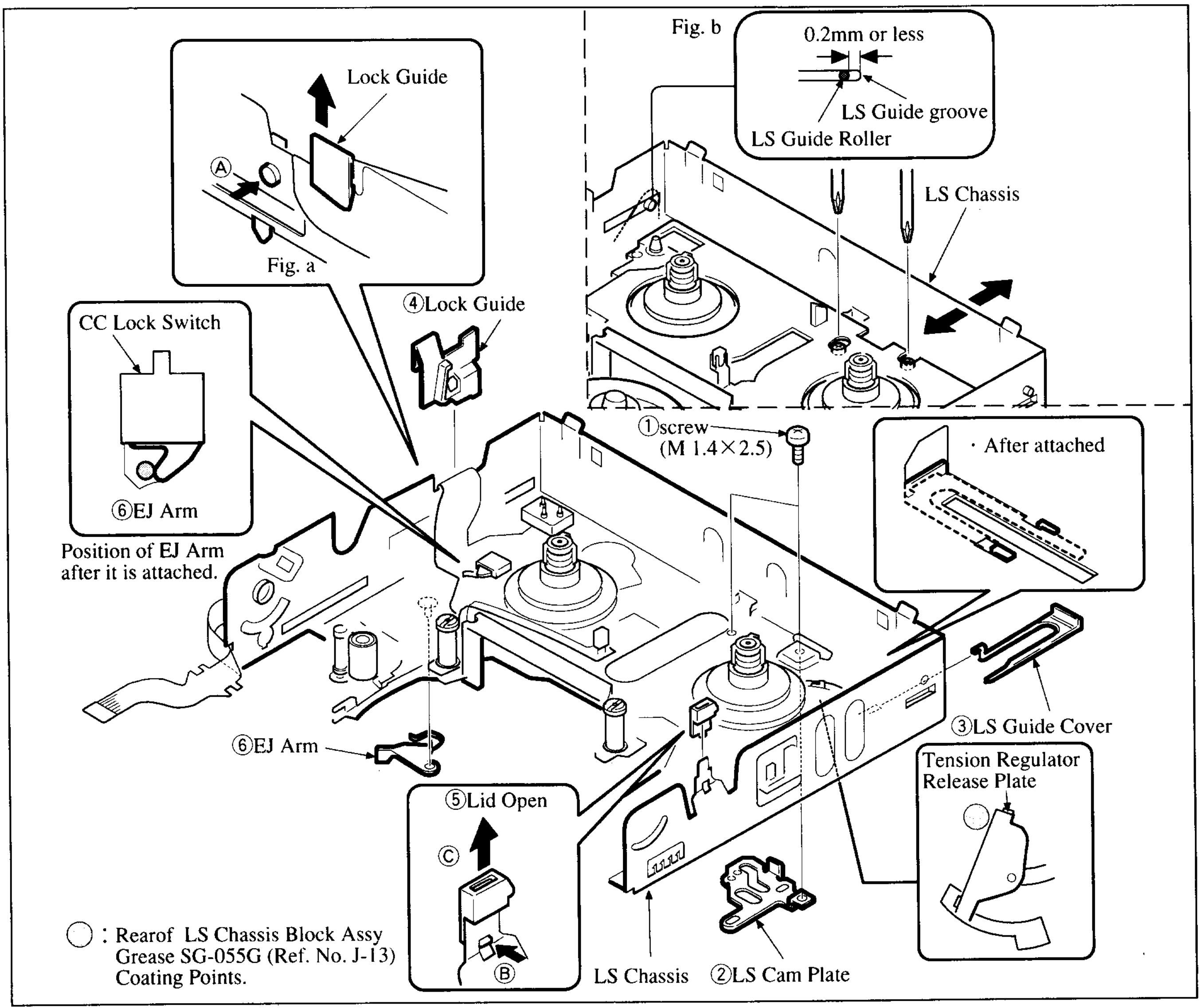
3-9. LS Cam Plate, LS Guide Cover, Lid Opener, EJ Arm, Lock Guide
(Refer to Fig. 14)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the LS Chassis Block Assy referring to section 3-5.
4) Remove the two screws (M 1.4×2.5) ① and remove the the LS Cam Plate ②.
   In this state, write a mark on the screw ① and on the LS Chassis indicating the position of the LS Cam Plate which helps during re-assembly.
5) Remove the LS Guide Cover ③.
6) Remove the Lock Guide ④ in the upward direction. (Refer to Fig. a)
7) Remove the Lid Open ⑤ in the direction of the arrow Ⓒ while pushing Ⓑ portion .
8) Remove the EJ Arm ⑥ . (The EJ Arm ⑥ is press-fitted. If the EJ Arm ⑥ is not damaged, it is not necessary to replace.)

2. Precautions During Re-Assembly

1) After the captioned parts are attached, confirm that the respective claws and dowels are engaged completely.
2) If the EJ Arm ⑥ is removed, be sure to replace it with the new replacement EJ Arm.
3) If any mark is not written when removing the LS Cam Plate ②, adjust and attack it as shown in Fig. b.


Lock Guide
Ⓐ
Fig. a
CC Lock Switch
⑥EJ Arm
Position of EJ Arm after it is attached.
④Lock Guide
Fig. b
0.2mm or less
LS Guide groove
LS Guide Roller
LS Chassis
①screw (M 1.4×2.5)
· After attached
③LS Guide Cover
Tension Regulator Release Plate
⑥EJ Arm
⑤Lid Open
Ⓒ
Ⓑ
LS Chassis
②LS Cam Plate

○ : Rearof LS Chassis Block Assy Grease SG-055G (Ref. No. J-13) Coating Points.

Fig. 14

3-10. Guide Base (S) and (T) Block Assemblies, Guide Rail (Refer to Fig. 15)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
3) Remove the LS Chassis Block Assy referring to section 3-5.
4) While pushing the GB Stoppers (S) and (T) in the direction of arrow Ⓐ, press the guide arm in the direction of the arrow Ⓑ, and turn the Guide Base (S) and (T) Block Assemblies : ① and ② in the direction of the arrow Ⓒ respectively, and remove them.
5) Remove the two screws (M 1.4×2.5) ③ and remove the the Guide Rail Assy ④.
6) Remove the Stopper (S) and (T) : ⑤ and ⑥, then remove the GB Stopper S and T: ⑦ and ⑧.

2. Precautions During Re-Assembly

1) Pay attention not to deform the Guide Rail.
2) Do not touch the tape guide of the Guide Base (S) and (T) Block Assemblies with bare hand.
3) Pay attention not to deform the Stoppers (S) and (T).
4) When attaching the Guide Base (S) and (T) Blocks to the Guide Rail, move back the Guide Bases until the GB Stoppers (S) and (T) are locked. ("Click" sounds.)
5) After the captioned parts are attached, perform section "4. TAPE PATH ADJUSTMENT".

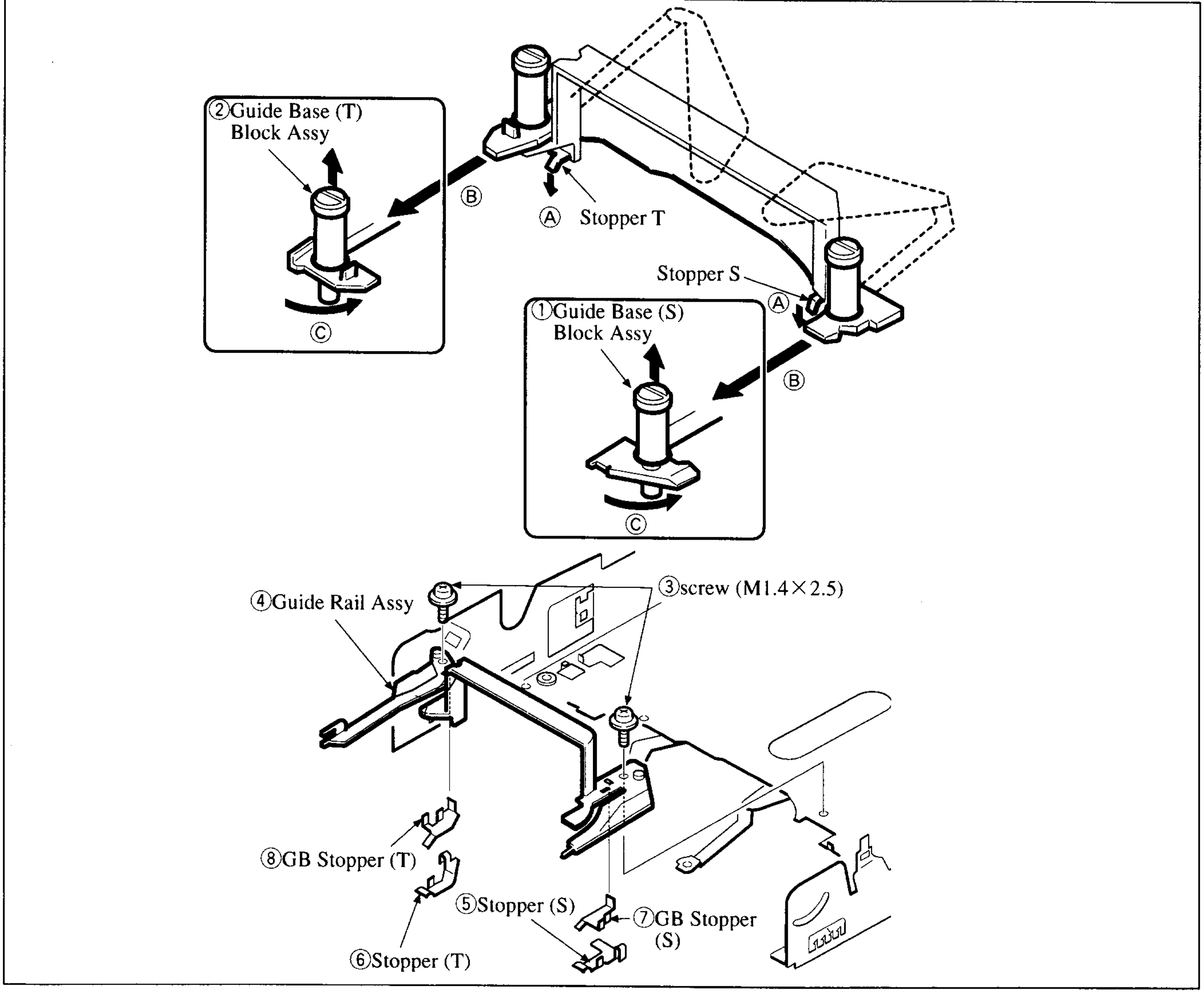

②Guide Base (T)
Block Assy
Ⓑ
Ⓐ Stopper T
Ⓒ
Stopper S
Ⓐ
①Guide Base (S)
Block Assy
Ⓑ
Ⓒ
④Guide Rail Assy
③screw (M1.4×2.5)
⑧GB Stopper (T)
⑤Stopper (S)
⑦GB Stopper
(S)
⑥Stopper (T)

Fig. 15

- **PARTS CONSTITUTING THE MECHANISM CHASSIS**

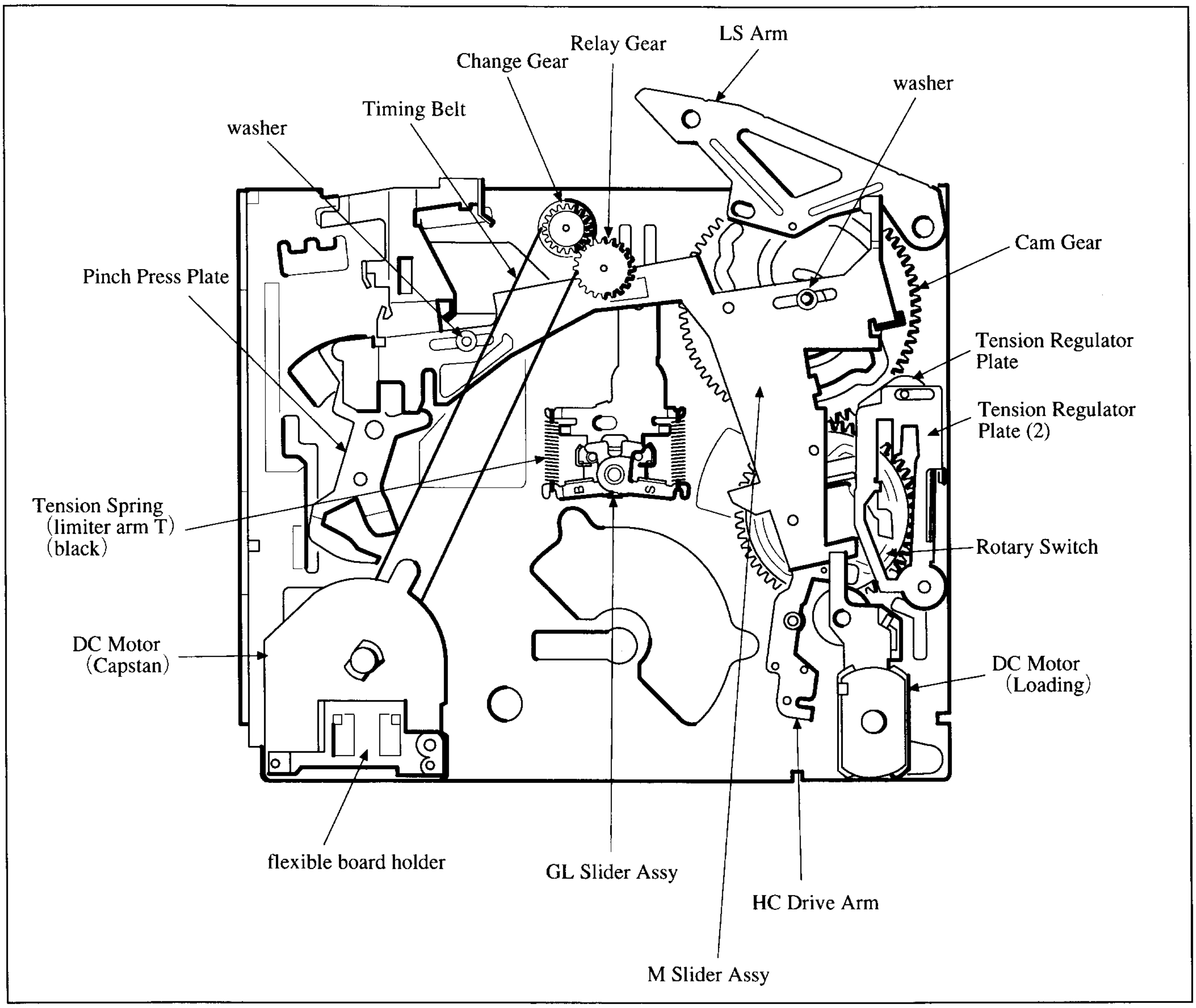

Relay Gear
Change Gear
LS Arm
washer
Timing Belt
washer
Cam Gear
Pinch Press Plate
Tension Regulator Plate
Tension Regulator Plate (2)
Tension Spring (limiter arm T) (black)
Rotary Switch
DC Motor (Capstan)
DC Motor (Loading)
flexible board holder
GL Slider Assy
HC Drive Arm
M Slider Assy

Fig.16

3-11. DC Motor Assy (Loading)
(Refer to Fig. 17)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove soldering from the Ⓐ portion.
8) Remove the screw (M 1.4×2.5) ① and remove the Motor Holder Block Assy ② from the mechanism chassis along with the claw beneath the Motor Holder Block Assy as shown by the arrow Ⓑ.
9) Remove the Motor Shield ③ in the direction of the arrow Ⓒ (by opening the two ★ star marked points).
10) Release the claw on top of the Motor Holder ⑤ and remove the DC Motor Assy ④ in the direction of the arrow Ⓓ.
11) Remove the Motor Holder Sleeve ⑥, Gear A⑦ and Worm Shaft ⑧ in this order.

2. Precautions During Re-Assembly

1) Before attaching the Gear A ⑥, coat the Retainer Shaft Ⓔ with grease SG-055G (Ref. No. J-13).
2) After assembling the Motor Holder Block Assy, coat the six locations shown by Fig. a with grease SG-055G (Ref. No. J-13).
3) The HC Drive Arm is easy to drop. Confirm that it is attacked referring to Fig. 19.

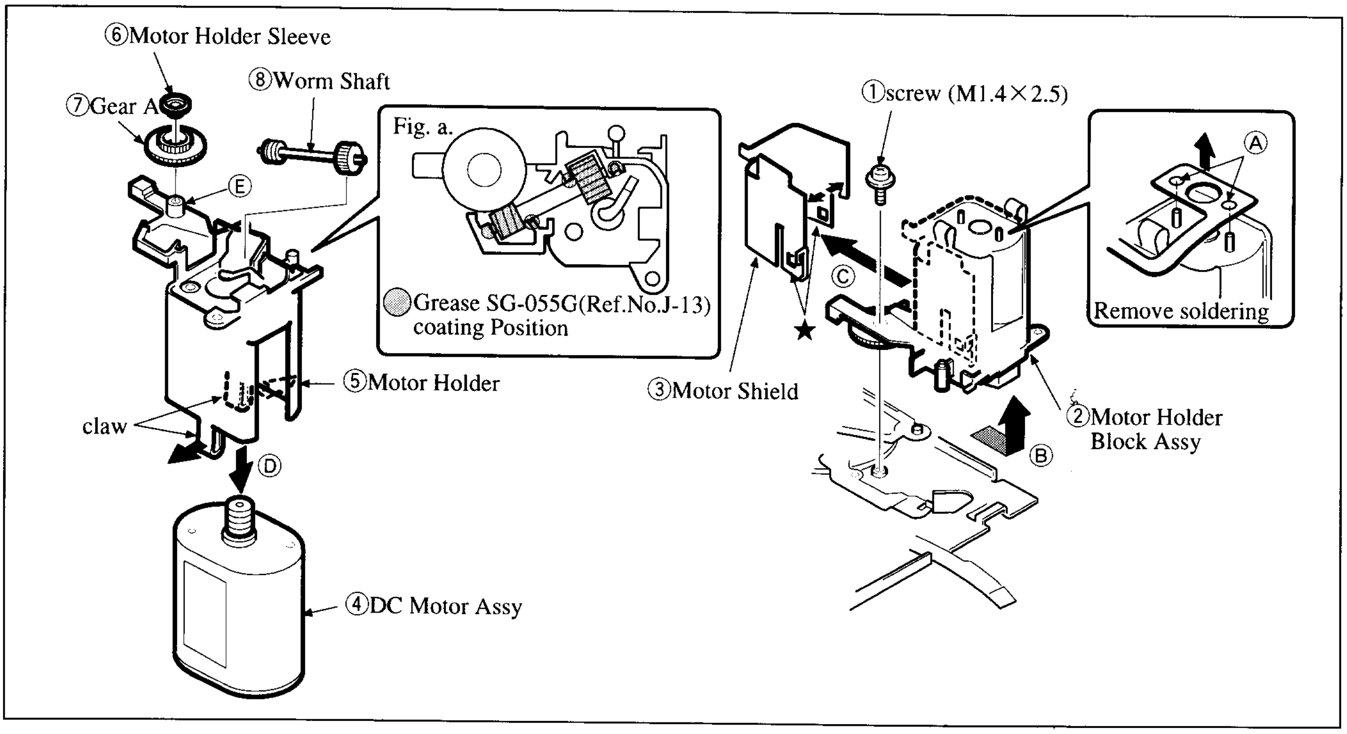

⑥Motor Holder Sleeve
⑧Worm Shaft
⑦Gear A
Ⓔ
Fig. a.
●Grease SG-055G(Ref.No.J-13) coating Position
⑤Motor Holder
claw
Ⓓ
④DC Motor Assy
①screw (M1.4×2.5)
Ⓒ
★
③Motor Shield
Ⓐ
Remove soldering
②Motor Holder Block Assy
Ⓑ

Fig. 17

3-12. Tension Regulator Plate 2, Relay Gear, M Slider Assy (Refer to Fig. 18)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC motor referring to section 3-11.
8) Remove the Tension Regulator Plate 2 ①.
9) Remove the Relay Gear ②.
10) Remove the two washers ③. Remove the M Slider Assy ④. At the point, confirm that the LS Roller ⑤ is not dropped.

2. Precautions During Re-Assembly

1) Before attaching the M Slider Assy ④, coat the LS Roller Shaft Ⓐ on the back of the M Slider Assy, the Pinch Press Plate Shaft Ⓑ and the mechanism chassis M Slider Axis Ⓒ with grease SG-055G (Ref. No. J-13). (Refer to Fig. b)
2) While confirming the phase-determining holes, attach the M Slider Assy ④ while paying attention to the claw.
3) Attach the Tension Regulator Plate 2 ① inside the Tension Regulator Plate. (Refer to the asterisk * Marked portion of Fig. a)
4) Before attaching the Relay Gear ②, coat the mechanism chassis Relay Gear Axis Ⓓ with grease SG-055G (Ref. No. J-13).

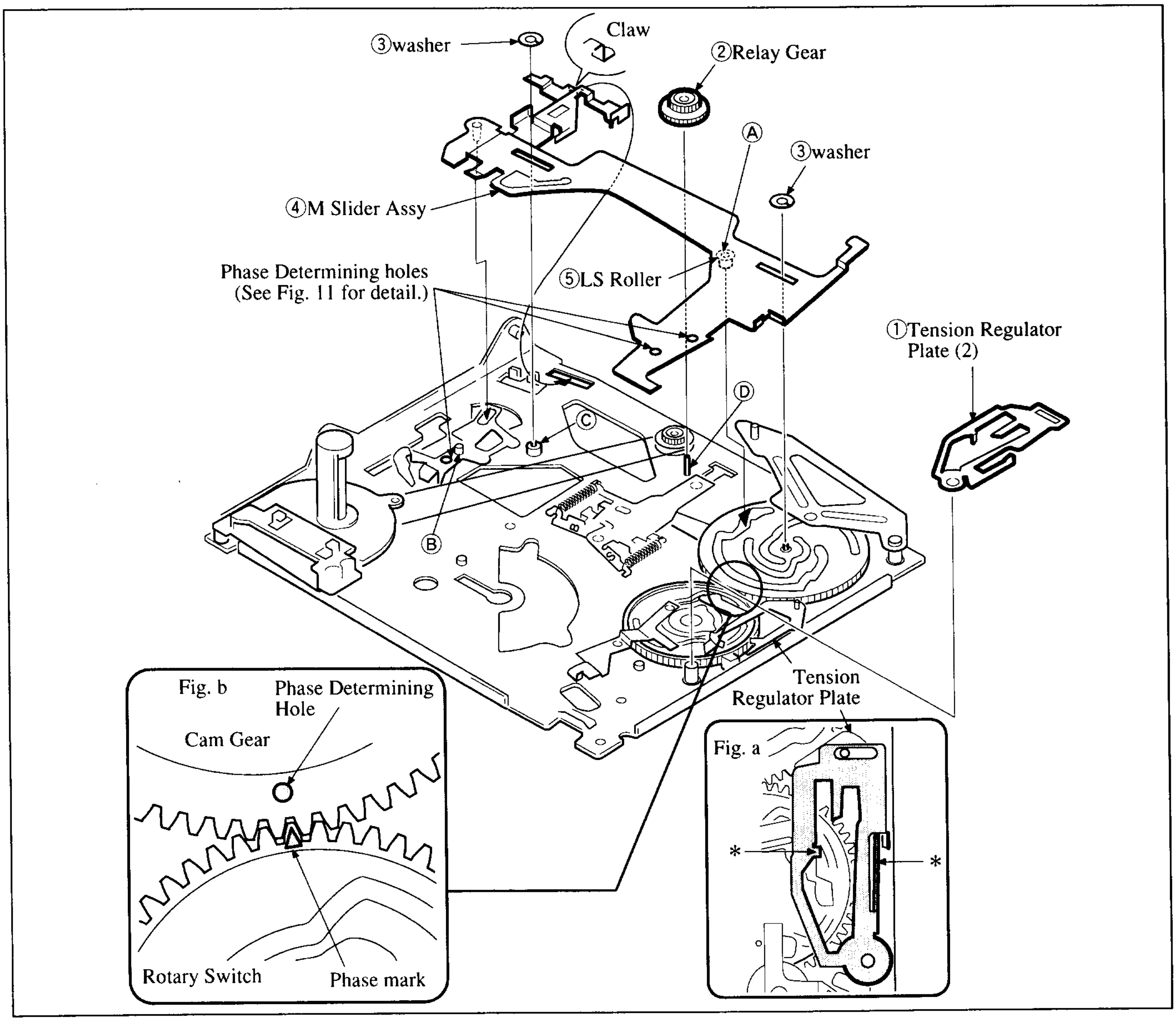

③washer
Claw
②Relay Gear
Ⓐ
③washer
④M Slider Assy
Phase Determining holes
(See Fig. 11 for detail.)
⑤LS Roller
①Tension Regulator Plate (2)
Ⓓ
Ⓒ
Ⓑ
Tension Regulator Plate
Fig. b
Phase Determining Hole
Cam Gear
Rotary Switch
Phase mark
Fig. a
*
*

Fig. 18

3-13. LS Arm, HC Drive Arm, Pinch Press Plate, Tension Regulator Plate (Refer to Fig. 19)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm ①. At this point, confirm that the LS Roller ② is not dropped.
10) Remove the HC Drive Arm ③, Pinch Press Plate ④ and Tension Regulator Plate ⑤.

2. Precautions During Re-Assembly

1) Before attaching the captioned parts, confirm that phases of the Cam Gear and the Rotary Switch agree. (See Fig. a.)
2) Insert the dowel of the Tension Regulator Plate ⑤ into the groove outside the rotary switch.
3) Before attaching the Pinch Press Plate ④, check for grease on the mechanism chassis Pinch Press Plate Shaft Ⓐ. If grease cannot be found, coat it with grease SG-055G (Ref. No. J-13). After attaching the Pinch Press Plate ④, align its phase hole until it agrees with the phase-determining hole on the mechanism chassis.
4) Insert the dowel of the HC Drive Arm ③ into the groove inside the rotary switch.
5) Before attaching the LS Arm ①, coat the LS roller shaft of the LS Arm ① with grease SG-055G (Ref. No. J-13).

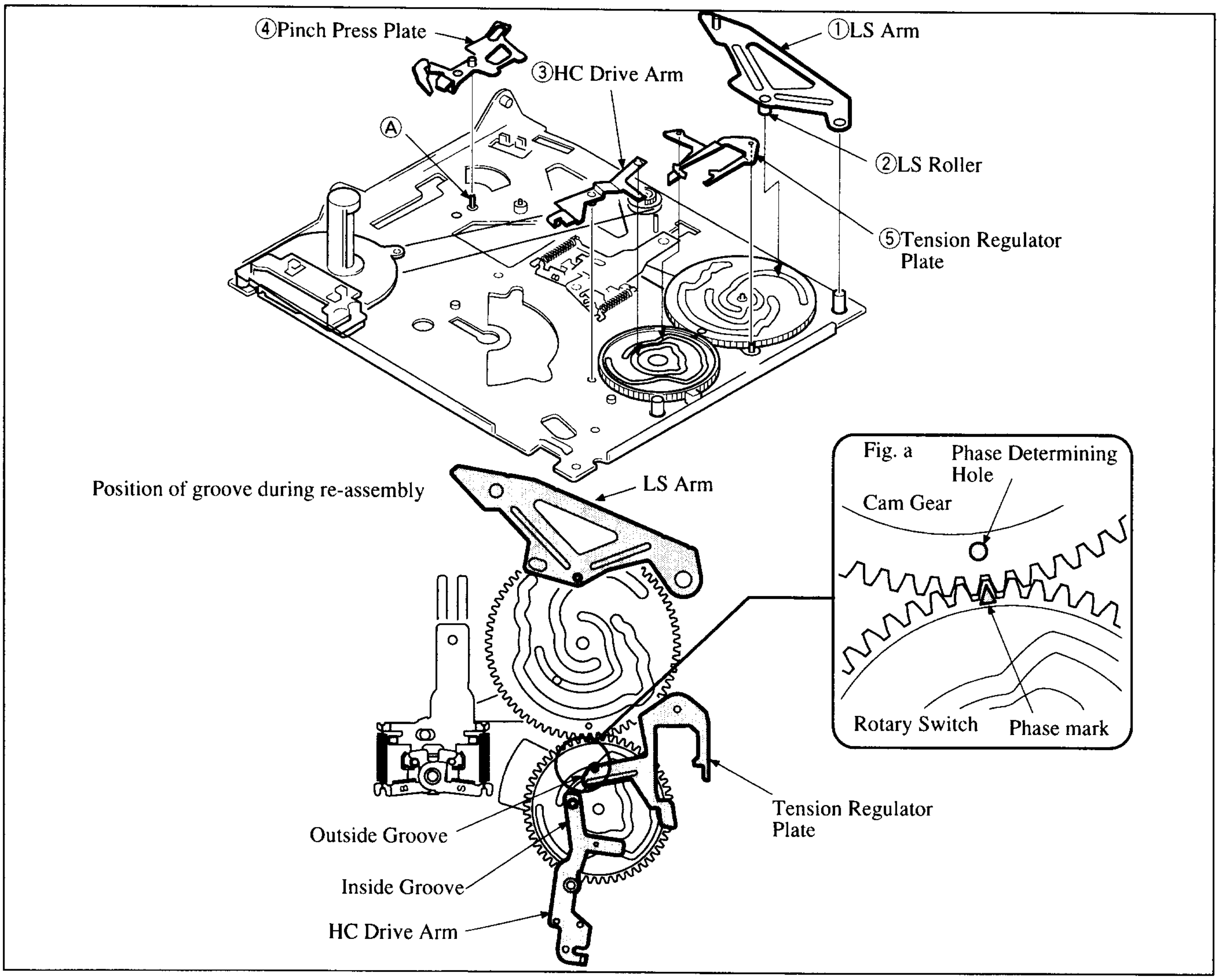

④Pinch Press Plate
③HC Drive Arm
①LS Arm
Ⓐ
②LS Roller
⑤Tension Regulator Plate
Position of groove during re-assembly
LS Arm
Fig. a
Phase Determining Hole
Cam Gear
Rotary Switch
Phase mark
Outside Groove
Inside Groove
HC Drive Arm
Tension Regulator Plate

Fig. 19

3-14. Cam Gear (Refer to Fig. 20)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm and Tension Regulator Plate referring to section 3-13.
10) Remove the Cam Gear ①.

2. Precautions During Re-Assembly

1) Before attaching the Cam Gear ①, align the phase mark on the rotary switch until it agrees with the phase-determining hole Ⓐ on the mechanism chassis, and align the GL Arm's phase mark Ⓑ until it agrees with the phase-determining hole Ⓐ on the mechanism chassis. Coat the mechanism's chassis Gear Axis Ⓐ with grease SG-055G (Ref. No. J-13).
2) Attach the Cam Gear ① so that its phase hole agrees with the phase mark on the rotary switch. (Refer to Fig. a)
3) After the Cam Gear ① is attached, coat the GL Arm Axis Block of the cam gear with grease SG-055G (Ref. No. J-13).

Reference : The phase marks of the Cam Gear and Rotary Switch can also be checked from the rear side of mechanism chassis. It means that the phase can be confirmed after mechanism deck is fully re-assembled.

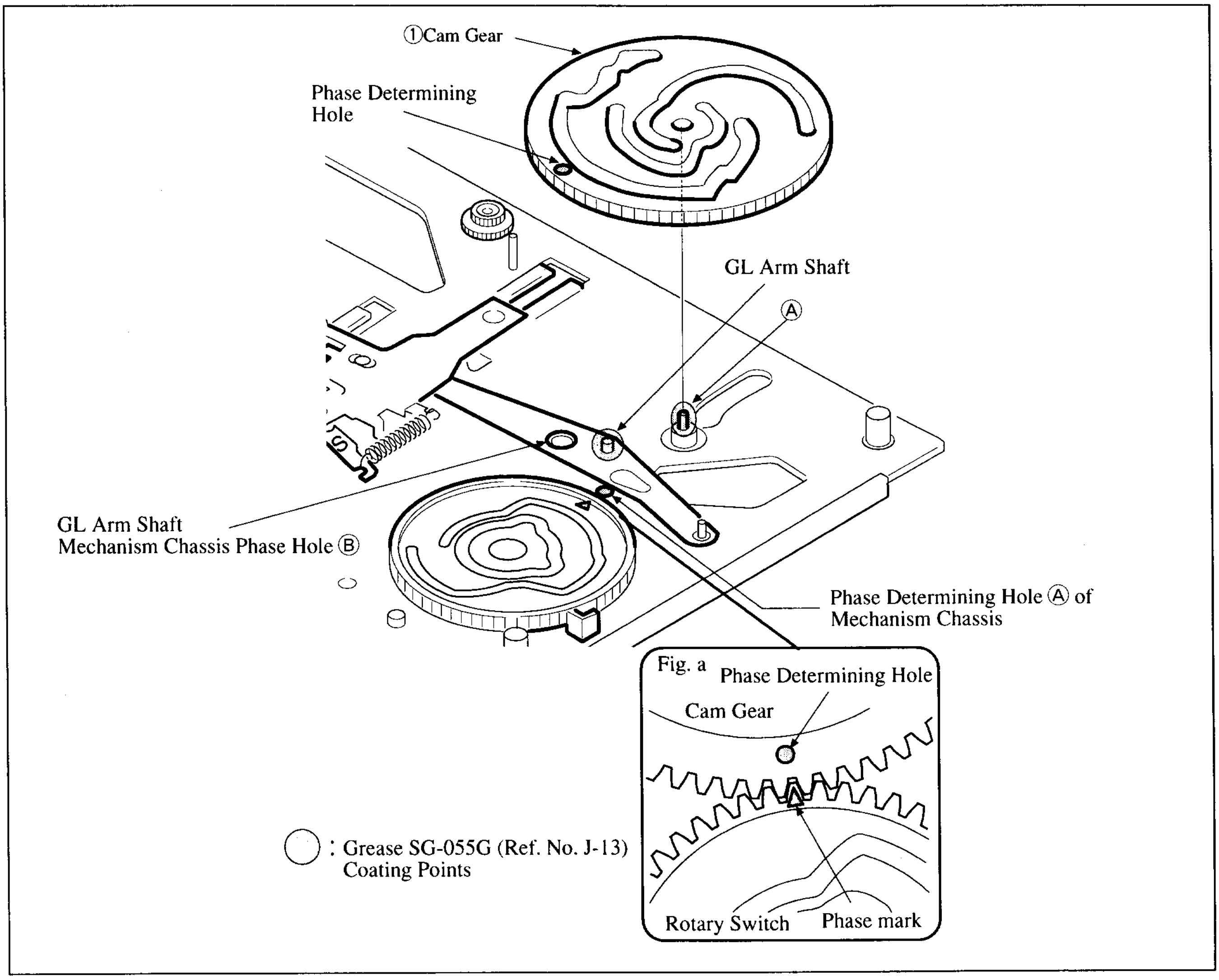

①Cam Gear
Phase Determining Hole
GL Arm Shaft
Ⓐ
GL Arm Shaft
Mechanism Chassis Phase Hole Ⓑ
Phase Determining Hole Ⓐ of Mechanism Chassis
Fig. a
Phase Determining Hole
Cam Gear
Rotary Switch
Phase mark
○ : Grease SG-055G (Ref. No. J-13) Coating Points

Fig. 20

3-15. GL Slider Assy, GL Arm (Refer to Fig. 21)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm and Tension Regulator Plate referring to section 3-13.
10) Remove the Cam Gear referring to section 3-14.
11) Remove the GL Slider Assy ① by sliding it in the direction of the arrow Ⓐ.
12) Remove the GL Arm ②.

2. Precautions During Re-Assembly

1) The Tension Spring T③ is colored black and the Tension Spring S④ is colored silver.
2) Coat the position shown in Fig. a of the GL Slider Assy ① with grease SG-055G (Ref. No. J-13).
3) Coat the four points Ⓑ where GL slider is attached on the mechanism chassis with grease SG-055G (Ref. No. J-13).
4) After attaching the GL Arm ② and the GL Slider Assy, align the GL arm phase hole until it agrees with the phase-determining hole on the mechanism chassis.

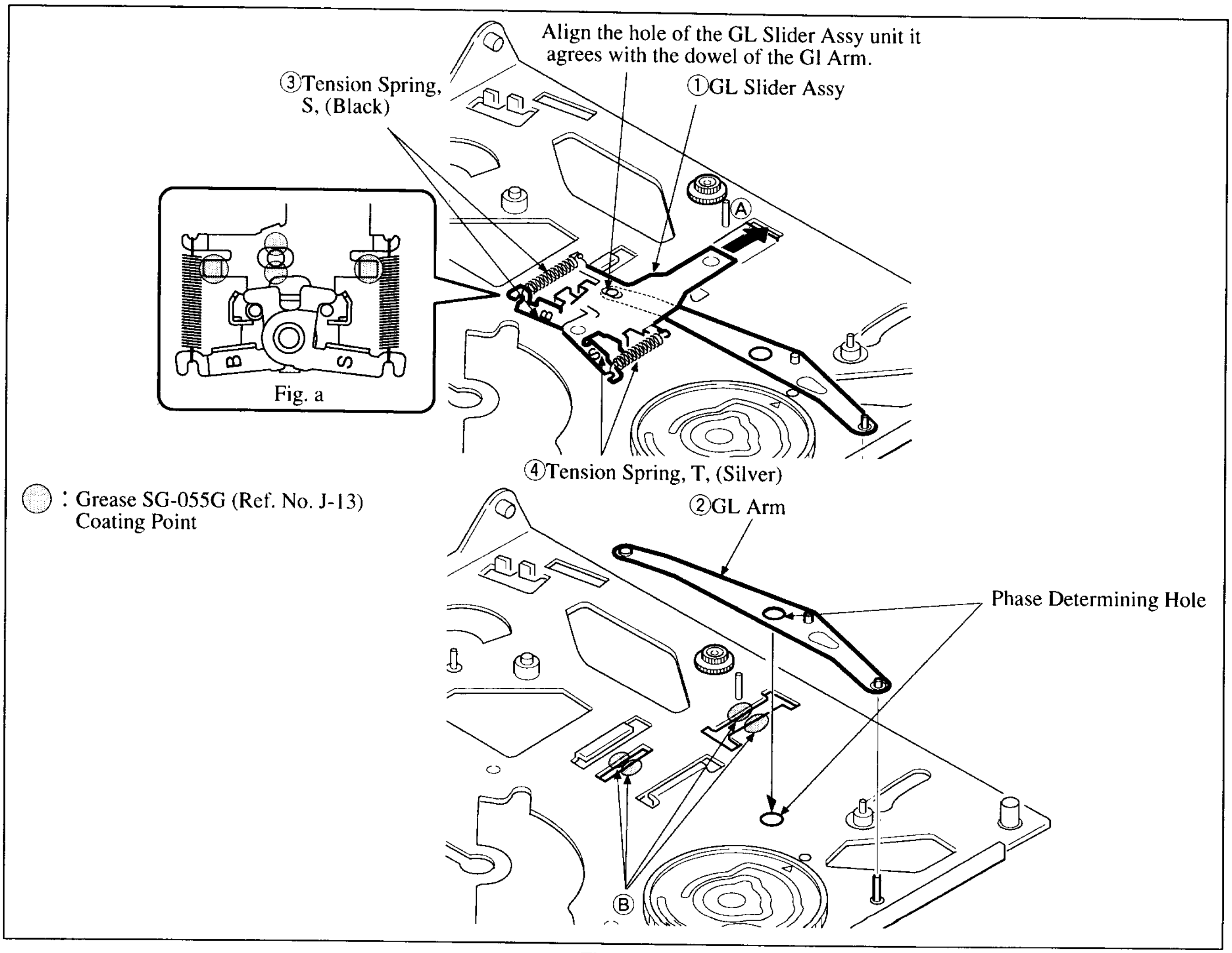

Align the hole of the GL Slider Assy unit it agrees with the dowel of the Gl Arm.
③Tension Spring, S, (Black)
①GL Slider Assy
Ⓐ
B
S
Fig. a
④Tension Spring, T, (Silver)
②GL Arm
Phase Determining Hole
Ⓑ
● : Grease SG-055G (Ref. No. J-13) Coating Point

Fig. 21

3-16. Rotary Switch (Refer to Fig. 22)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the LS Arm, Tension Regulator Plate, HC Drive Arm and Pinch Press Plate referring to section 3-13.
10) Remove the Cam Gear referring to section 3-14.
11) Remove soldering the portion Ⓐ on the rear of the Rotary Switch. (Pay attention at this moment that the GL Slider and GL Arm do not drop.)
12) While lifting up the portion Ⓑ about 1 mm (pay attention not to break it), hold the portion Ⓒ and turn it in the direction of the arrow Ⓓ to remove the Rotary Switch.

2. Precautions During Re-Assembly

1) Before attaching the Rotary Switch by soldering on the FP-220 board, insert the portion Ⓑ dowel into the hole on the mechanism chassis. Confirm that the three claws are engaged with the mechanism chassis.

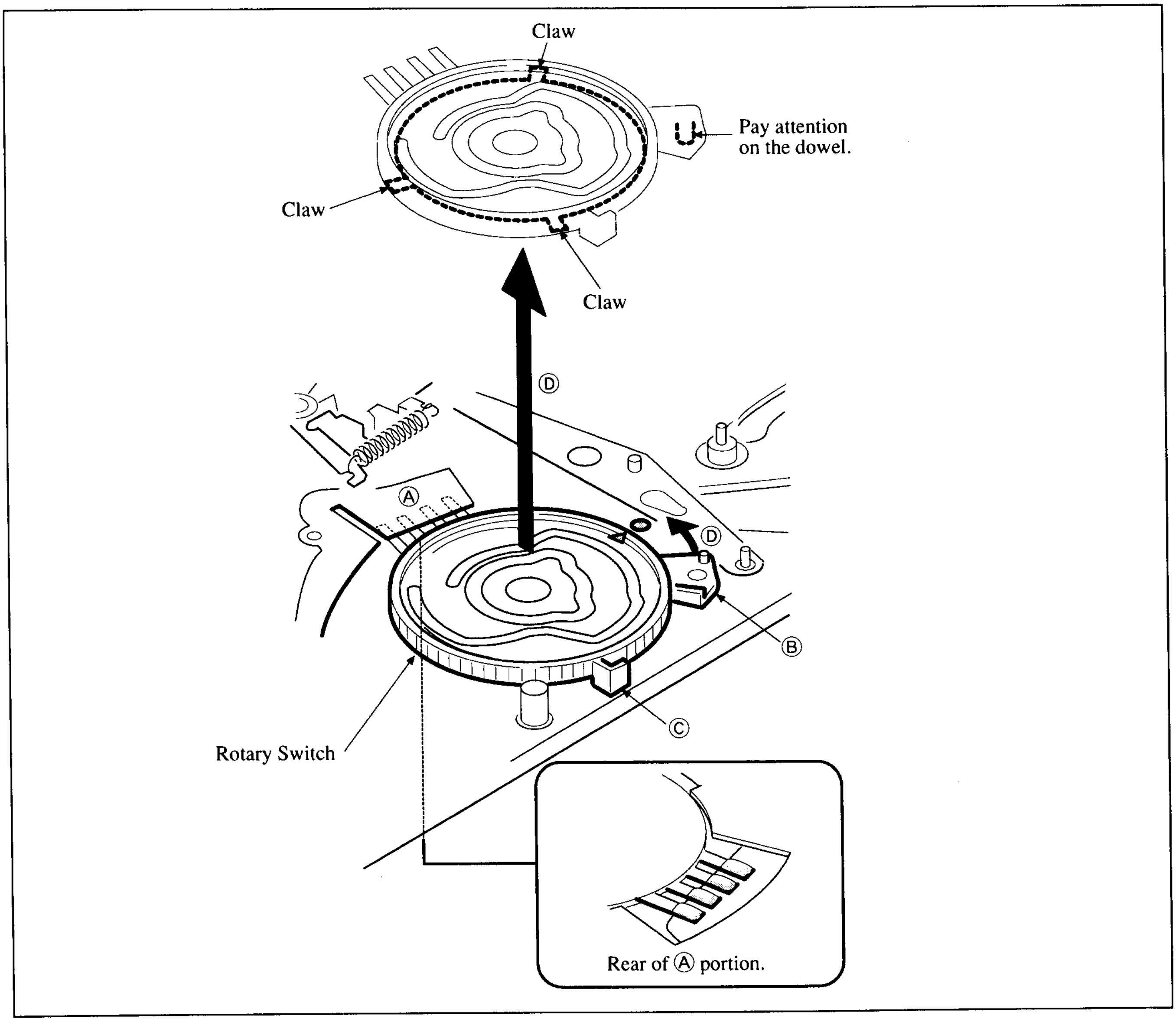


Fig. 22

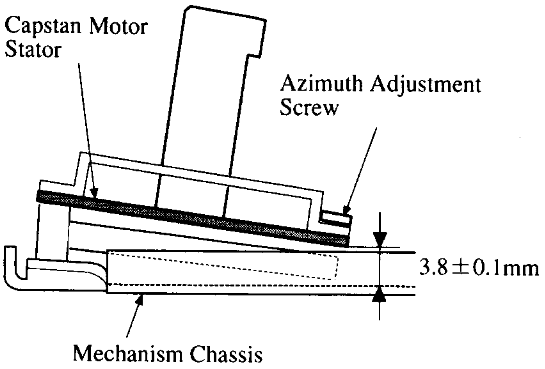
3-17. Capstan Motor (Refer to Fig. 23)

1. Disassembly Procedure

1) Remove the Cassette Compartment Block Assy referring to section 1-1.
2) Remove the HC Roller Block Assy referring to section 3-1.
3) Remove the Drum Assy referring to section 3-2.
4) Remove the Drum Base Block Assy referring to section 3-3.
5) Remove the Gooseneck Retainer and Gooseneck Gear Assy referring to section 3-4.
6) Remove the LS Chassis Block Assy referring to section 3-5.
7) Remove the DC Motor Assy referring to section 3-11.
8) Remove the Tension Regulator Plate 2, Relay Gear and M Slider Assy referring to section 3-12.
9) Remove the Pinch Press Plate referring to section 3-13.
10) Remove the screw (M 1.4×6.7) ① and remove the Flexible Board Holder ②.
11) Remove the two screws (M 1.4×6.7) ③ and remove the Capstan Motor ④, Timing Belt ⑤ and Capstan Spacer ⑥.
12) Remove the washer ⑦ and remove the Changer Gear ⑧.

2. Precautions During Re-Assembly

1) Confirm that the timing belt is not twisted.
2) Do not touch the capstan with bare hand.
3) Lubricate the mechanism chassis's Change Gear shaft Ⓐ.
4) After attaching the Capstan Motor, perform the capstan azimuth adjustment.


Capstan Motor Stator
Azimuth Adjustment Screw
3.8±0.1mm
Mechanism Chassis

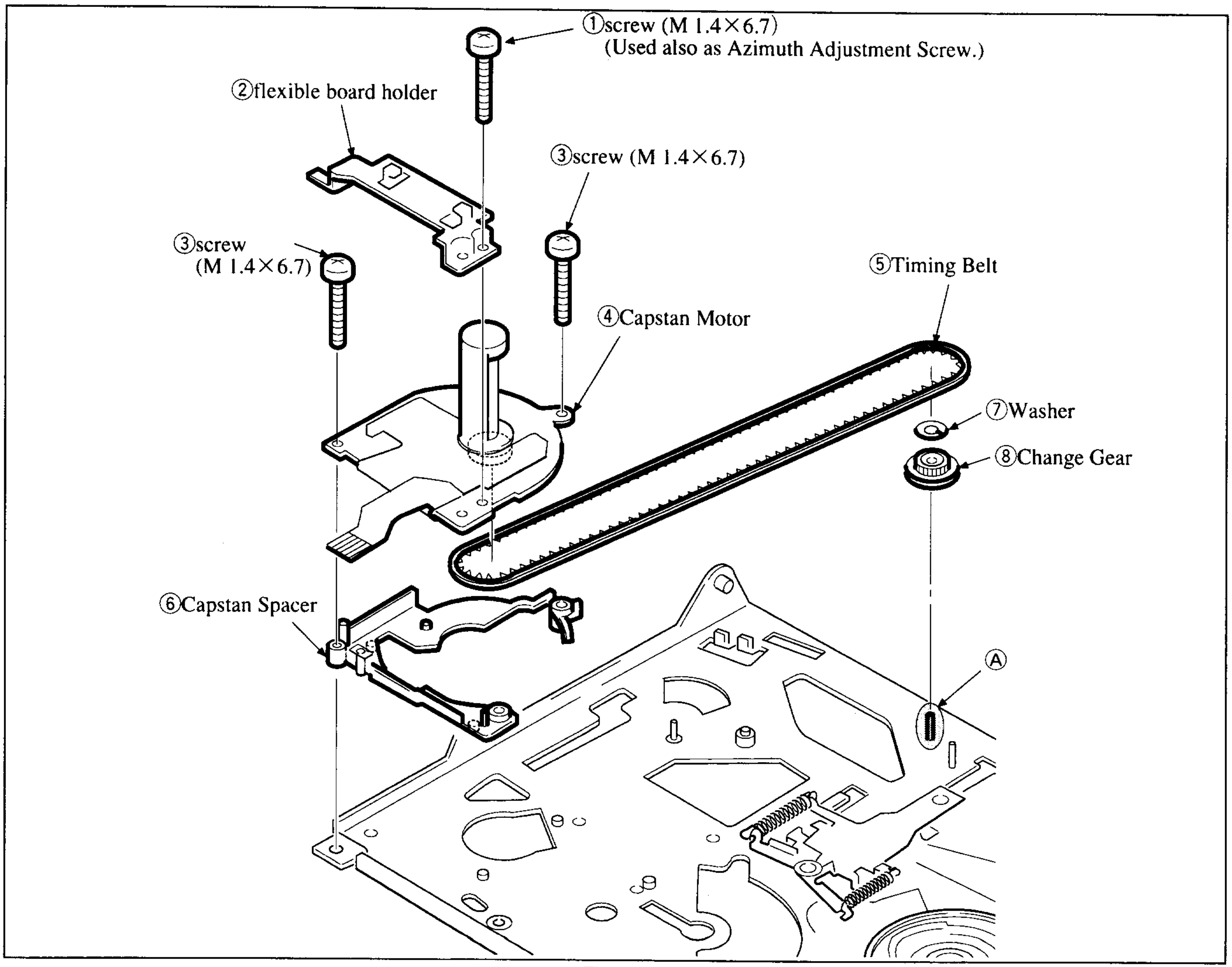

①screw (M 1.4×6.7)
(Used also as Azimuth Adjustment Screw.)
②flexible board holder
③screw (M 1.4×6.7)
③screw
(M 1.4×6.7)
⑤Timing Belt
④Capstan Motor
⑦Washer
⑧Change Gear
⑥Capstan Spacer
Ⓐ

Fig. 23

3-18. Tension Regulator Position Adjustment (Refer to Fig.24)

1. Adjustment Procedure

1) Insert a cassette Tape and run the Tape in PB mode.
2) While tape is running, confirm that the distance between the LS Chassis and TG-1 Guide's top flange is 8.3mm.
3) If not, proceed to step 4).
4) Loosen the screw ① (M 1.4×3).
5) If the TG-1 Guide is located inside the specified position, move position of the Tension Regulator Band Assy using the FWD B.T. Adjustment tool screwdriver (Ref. No. J-9) as shown in the direction of the arrow Ⓐ. If it is located outside, move it in the direction of the arrow Ⓑ.
6) Tighten the screw ① (M 1.4×3).

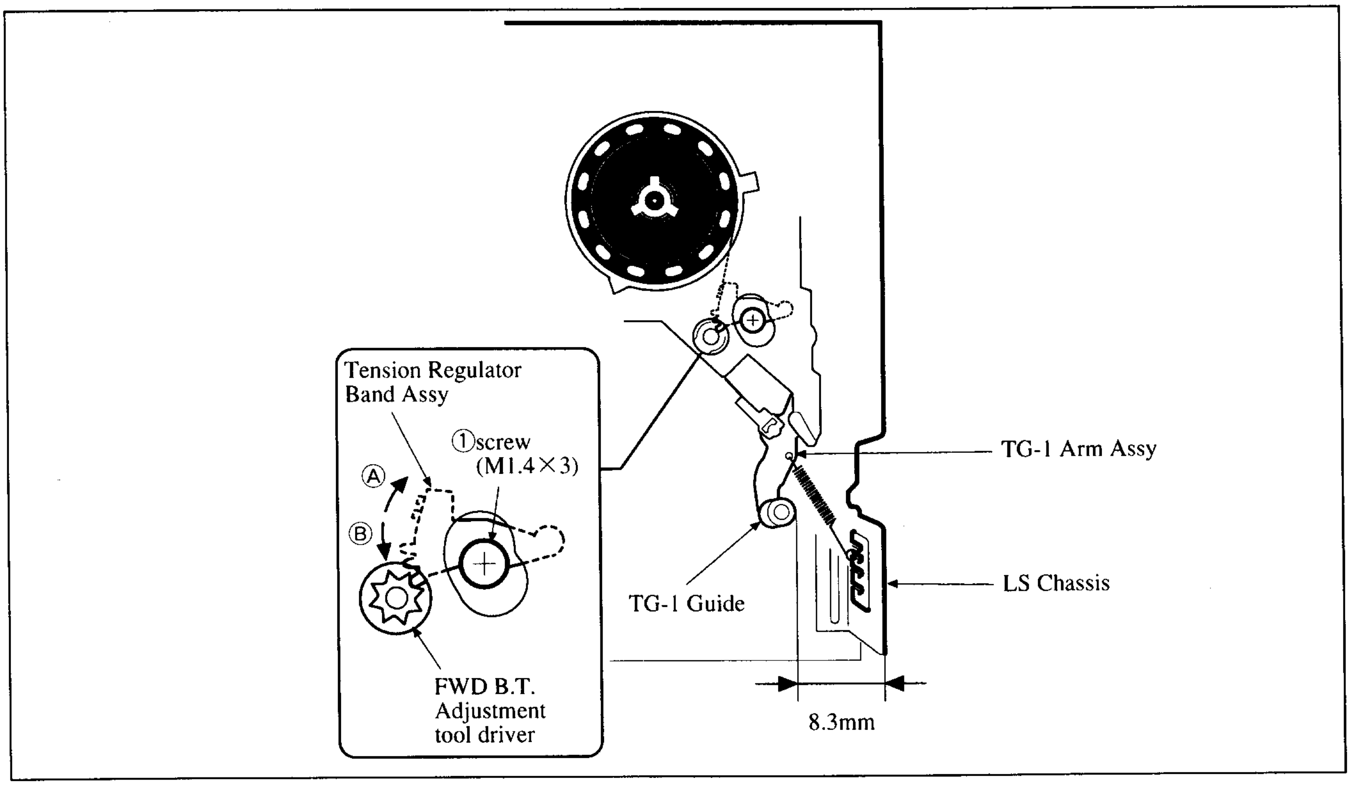

Tension Regulator Band Assy
①screw (M1.4×3)
Ⓐ
Ⓑ
FWD B.T. Adjustment tool driver
TG-1 Guide
TG-1 Arm Assy
LS Chassis
8.3mm

Fig.24

3-19. FWD Tape Hold-Back Tension Adjustment (Refer to Fig. 25)

1. Adjustment Procedure

1) Insert the torque measurement cassette to the machine.
2) Put the machine in the FWD mode. Confirm that the reading on the S side is in the range from 8.0 to 10.5 g•cm. If the reading is outside the specification range, make the following adjustments.
3) If the reading is higher than the specification, change the TG-1 Tension Spring to the side Ⓐ.
4) If the reading is lower than the specification, change the TG-1 Tension Spring to the side Ⓑ.

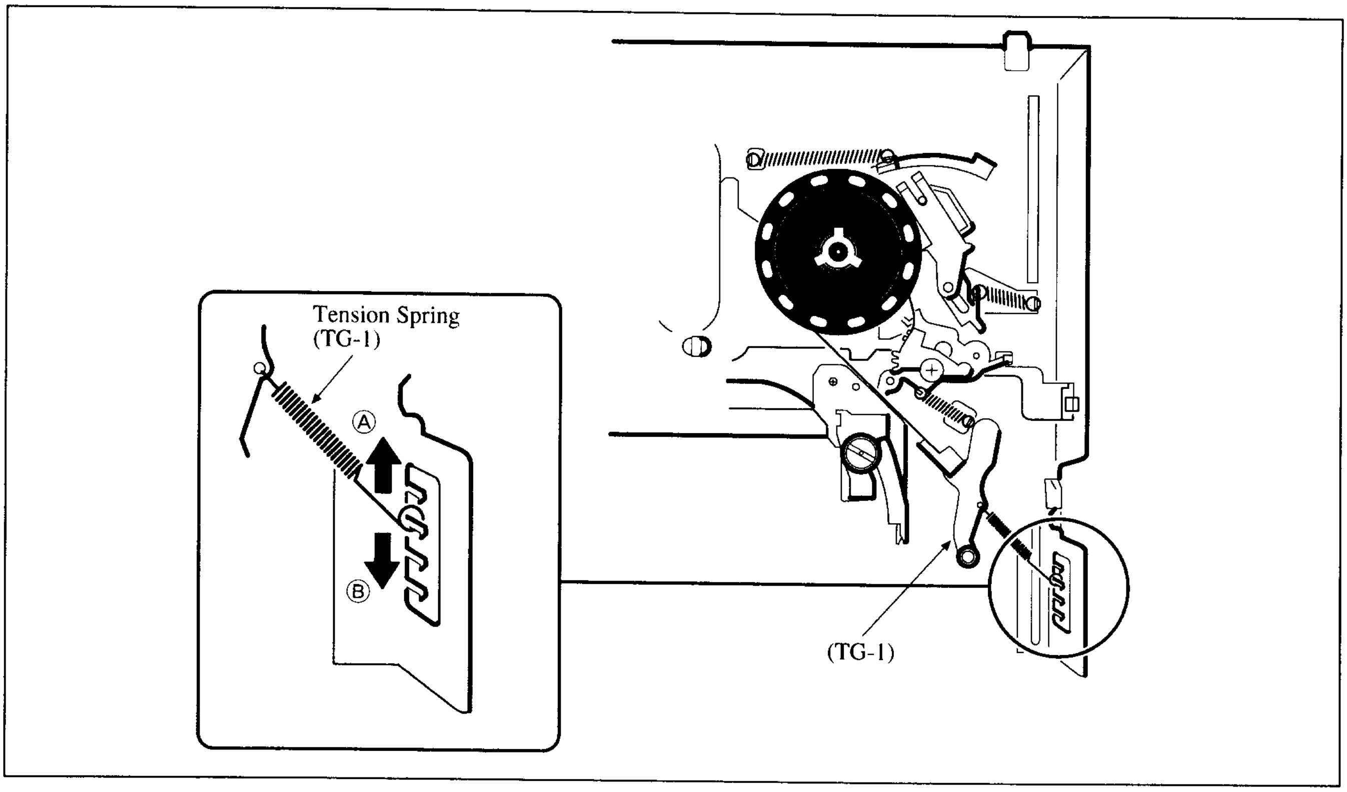


Fig. 25

4. TAPE PATH ADJUSTMENT

Purpose:	Adjusts the head linearity.
Adjustment Error:	Noise appears on top and bottom of display when playing back the tape recorded by other machines.

4-1. Preparations for Adjustments

1) Clean the tape running surface (tape guide, drum, capstan, pinch roller).
2) Connect the adjustment remote commander to the REMOTE terminal (JACK block).
3) Establish the PATH mode using the adjustment remote commander (Track Shift mode)* to cancel auto tracking.
4) Connect an oscilloscope.
   CH1: Test connector PB RF terminal
   External trigger: Test connector PB SWP terminal
5) Playback the tracking alignment tape WR5-1NP (NTSC) or WR5-1CP (PAL) (Ref. No. J-6).
6) Check to see that RF waveform is flat at input and exit sides on oscilloscope.
   If it not flat, perform the following section 4-2 until it is flat.
7) After completing the adjustment, release the PATH mode (Track Shift mode).*.

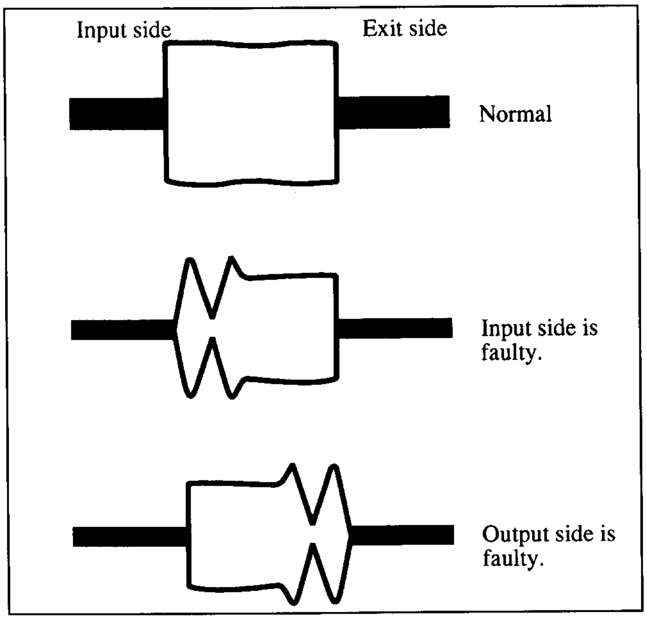


Fig. 26

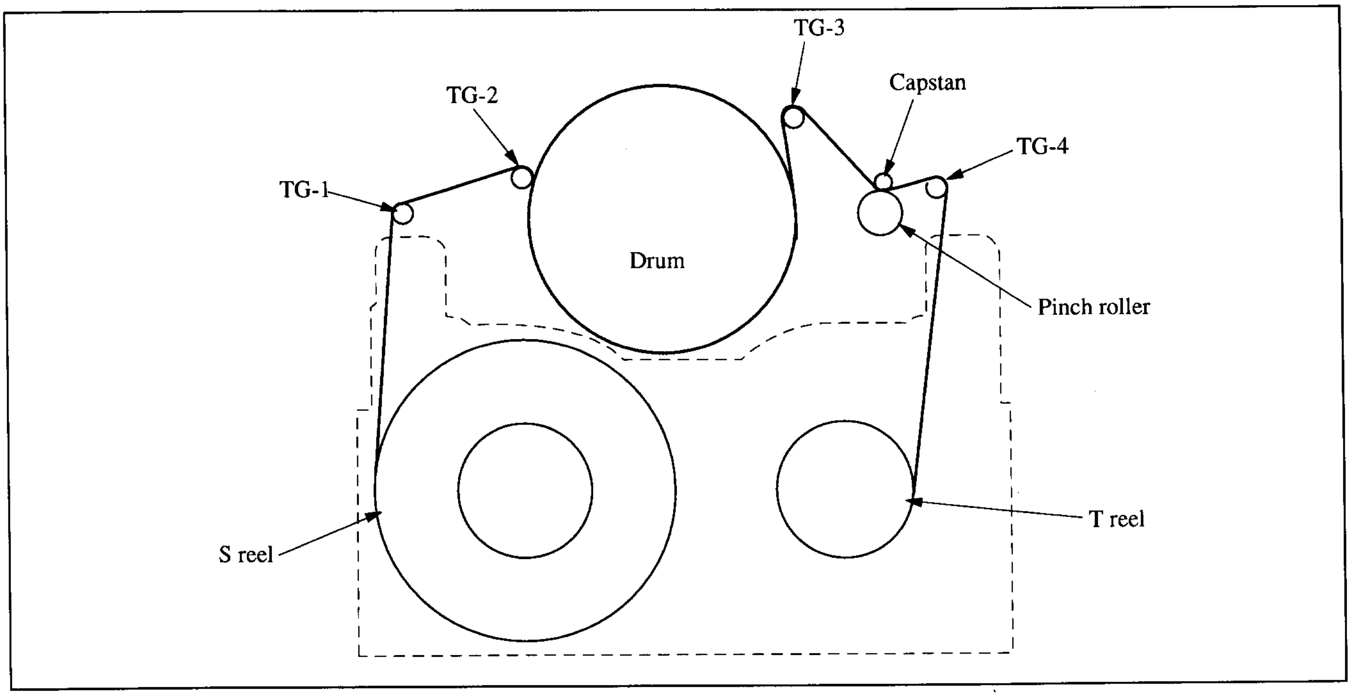


Fig. 27

* How to enter and exit the Track Shift mode. (In the case of CCD-TR420E/TR440E)

Entering the Track Shift mode

1. Select page : 6, address : 00 set data : 01 and press the PAUSE button.
2. Select page : 7, address : 01 set data : 03 and press the PAUSE button.

Exitting the Track Shift mode

1. Select page : 7, address : 01 set data : 00 and press the PAUSE button.
2. Select page : 6, address : 00 set data : 00 and press the PAUSE button.

4-2. Tracking Adjustment (Refer to Fig. 28.)

1) Playback the tracking alignment tape WR5-1NP (NTSC) or WR5-1CP (PAL) (Ref. No. J-6).
2) Adjust the tape guide No. 2 until the input side waveform becomes flat.
3) Adjust the tape guide No. 3 until the input side waveform becomes flat.

☆ Zenith adjustment screws for the TG-2 and TG-3 do not need to be adjusted.

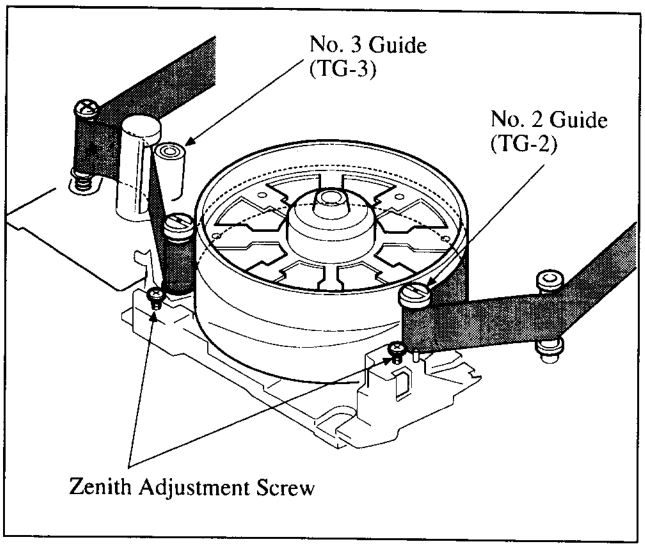


Fig. 28

4-3. No. 4 Guide (TG-4) Adjustment (Refer to Fig. 29.)

1) Playback a tape in REV mode.
2) Confirm that tape slack does not occur in between the guide No. 3 (TG-3) ① and Capstan ②. If tape slack is found, turn the height adjustment screw ④ of the Guide No. 4 (TG-4) ③ until tape slack is removed.
3) Playback a tape in FWD mode. Confirm that tape slack does not occur in between the guide No. 4 (TG-4) ③ and capstan ②. (Specification = 0.5 mm or less) If tape slack of more than 0.5 mm is found, turn the TG-4 nut ④ until the slack is 0.5 mm or less. Playback tape in REV mode and confirm that tape slack in between the guide No. 3 (TG-3) ① and capstan ② is 0.3 mm or less, the adjustment is complete.

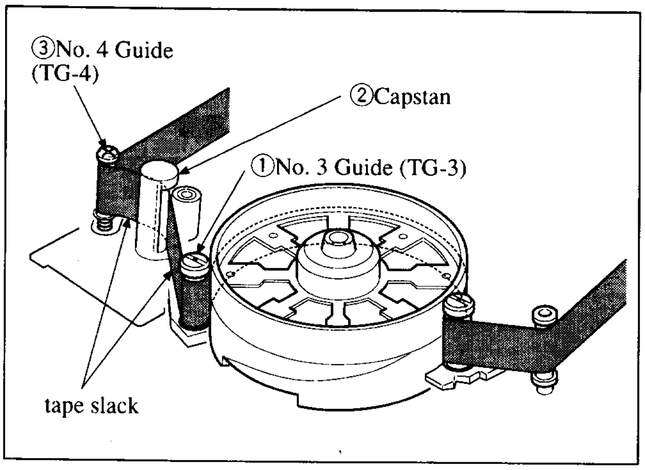


Fig. 29

4-4. CUE, REV Waveforms Check (Refer to Fig. 30.)

1) Playback the tracking alignment tape in REV mode.
   Confirm that pitches between the peaks of the waveform are equally spaced for 5 seconds or longer.
   The pitches are not equally spaced, perform sections "4-2. Tracking Adjustment" and section "4-3. No. 4 Guide Adjustment".
2) Playback the tracking alignment tape in CUE mode.
   Confirm that pitches between the peaks of the waveform are equally spaced for 5 seconds or longer.
   The pitches are not equally spaced, perform section "4-2. Tracking Adjustment".

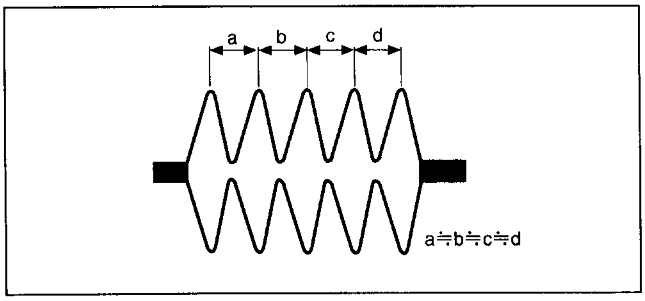


Fig. 30

4-5. Checks After Adjustments

4-5-1. Tracking Check

1) Confirm that amplitude of the RF waveform decreases to about 3/4 when the machine enters the PATH mode. (Refer to Fig. 31)
2) Confirm that the minimum amplitude (EMIN) of the RF waveform is 65 % or more of the maximum amplitude (EMAX). (Refer to Fig. 32)
3) Confirm that the RF waveform does not have too much fluctuation. (Refer to Fig. 33)

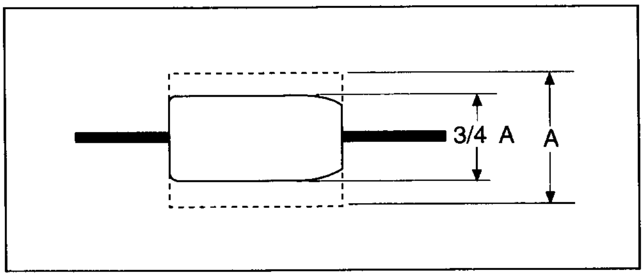


Fig. 31

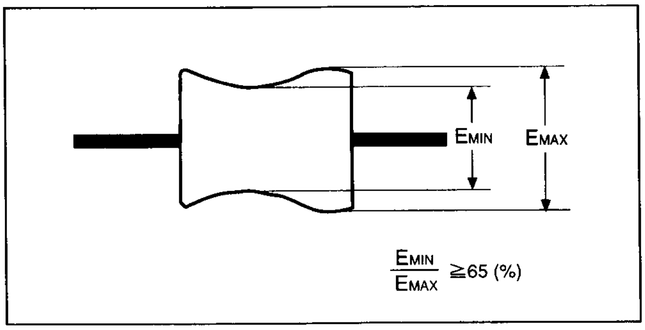


Fig. 32

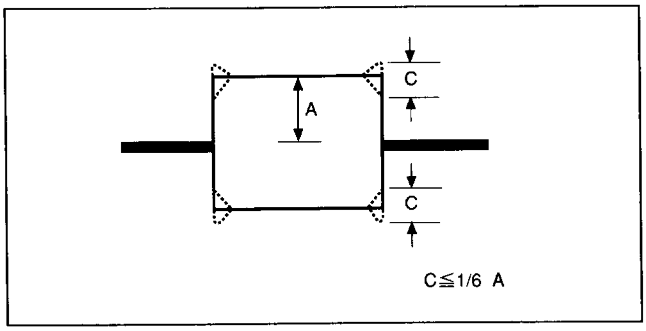


Fig. 33

4-5-2. Waveform Build-up Check (Refer to Fig. 34.)

1) Playback the tracking alignment tape.
2) Turn OFF the Track Shift mode.
3) Eject the tape once, insert and load the tape.
4) Start playing back the tape and confirm that the RF waveform builds up in three seconds with flat envelope. Confirm at this time that tape slack does not occur near pinch roller.
5) Playback the tape in CUE/REV and FF/REW modes respectively. Confirm that the RF waveform builds up in three seconds with flat envelope. Confirm at this time that tape slack does not occur near pinch roller.
6) Repeat the check items 3) to 5) again.

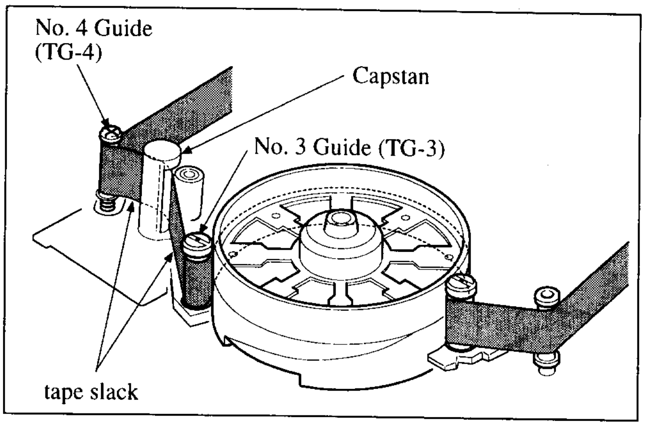


Fig. 34

4-5-3. Tape Pass Check (Refer to Fig. 35.)

1) Insert a thin video tape such as P6-120MP (NTSC) or P5-120MP (PAL). Playback the thin tape. Confirm that there is no clearance or curl of 0.3 mm or more at the following points: Upper flange of guide No. 2, upper flange of guide No. 3, upper and lower flanges of guide No. 4.
2) Confirm that there is no clearance or curl of 0.3 mm or more at each tape guide when the FF button is pressed from the playback mode to enter the CUE mode, and when the REW button is pressed from the playback mode to enter the REV mode.

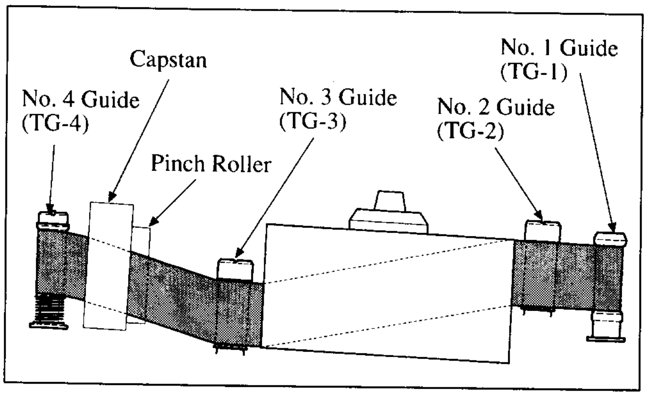
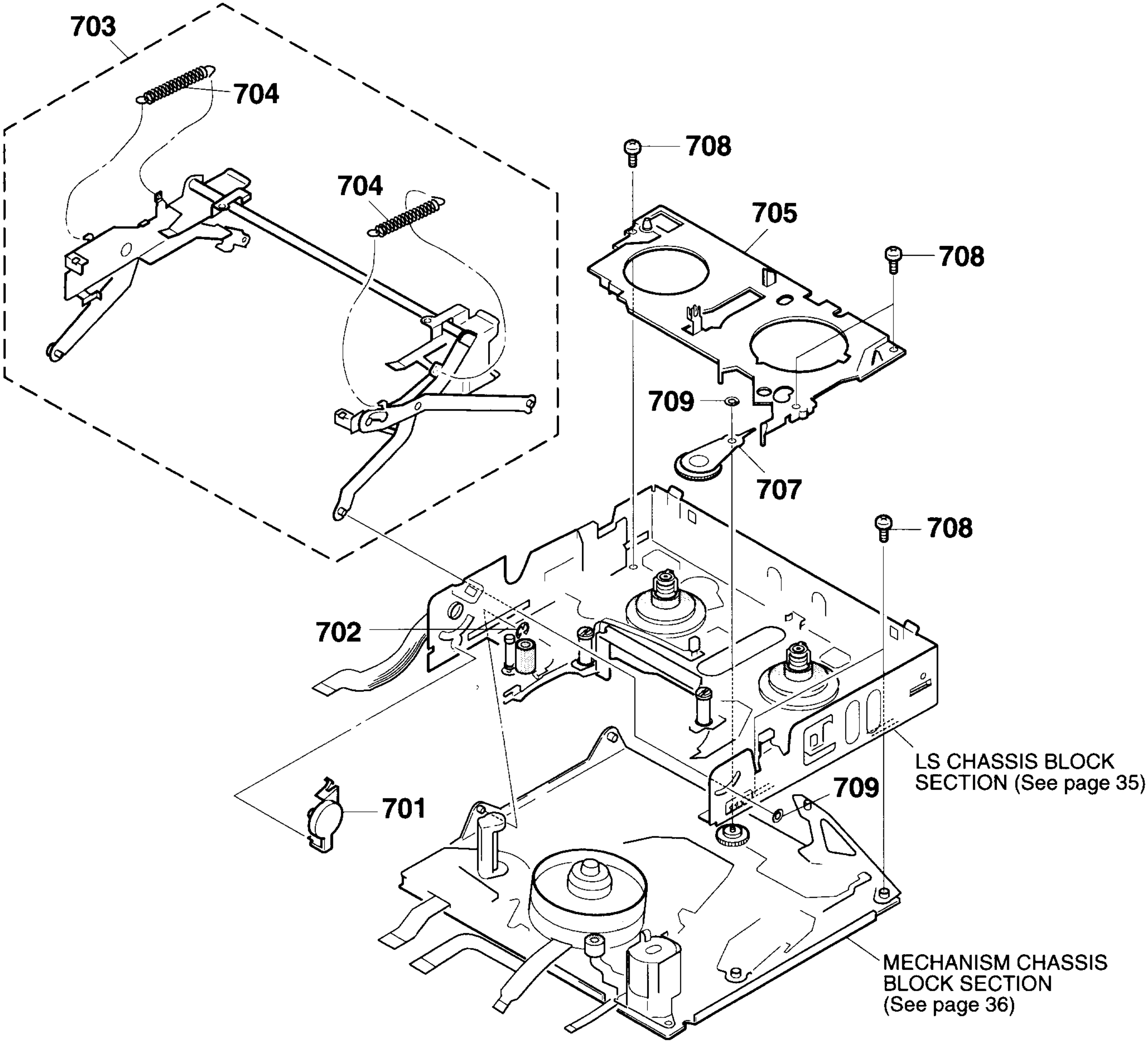


Fig. 35

5-1. Cassette Compartment Block Section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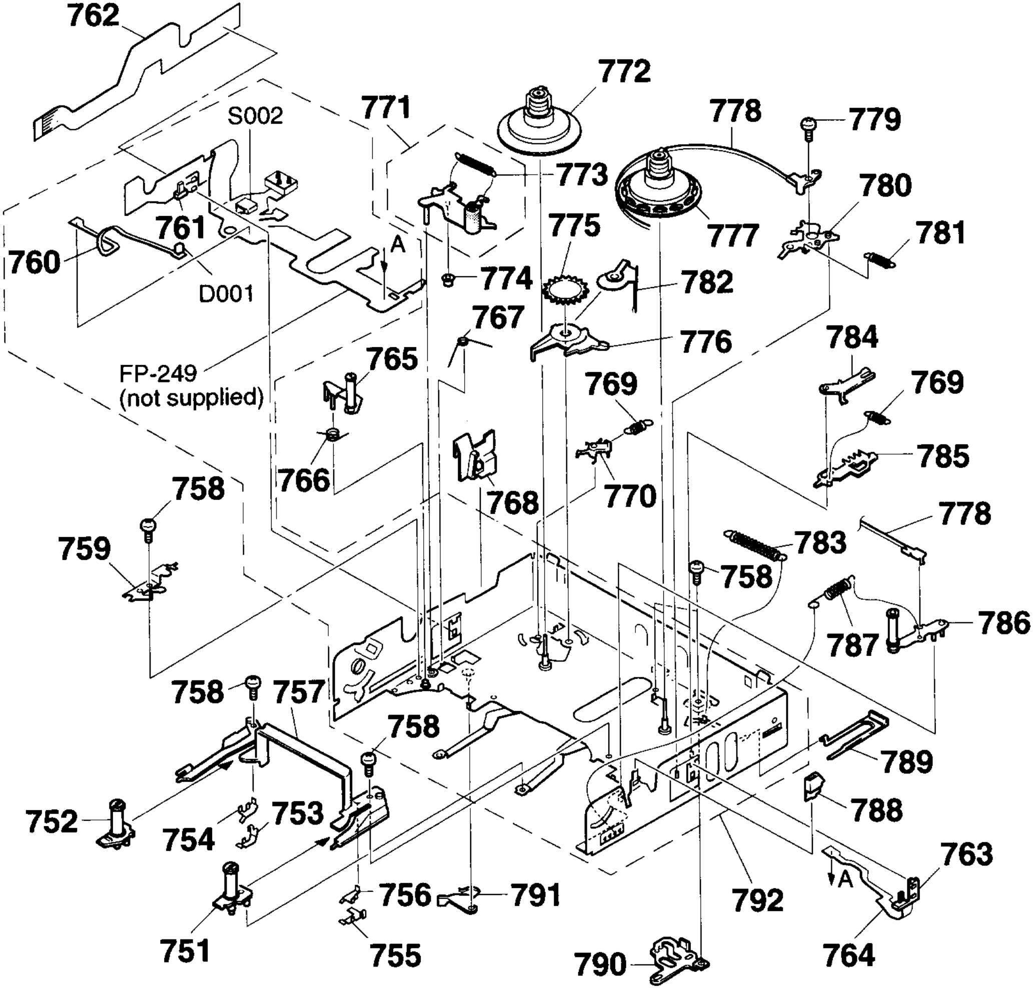
LS CHASSIS BLOCK SECTION (See page 35)
MECHANISM CHASSIS BLOCK SECTION (See page 36)

5-2. LS Chassis Block Section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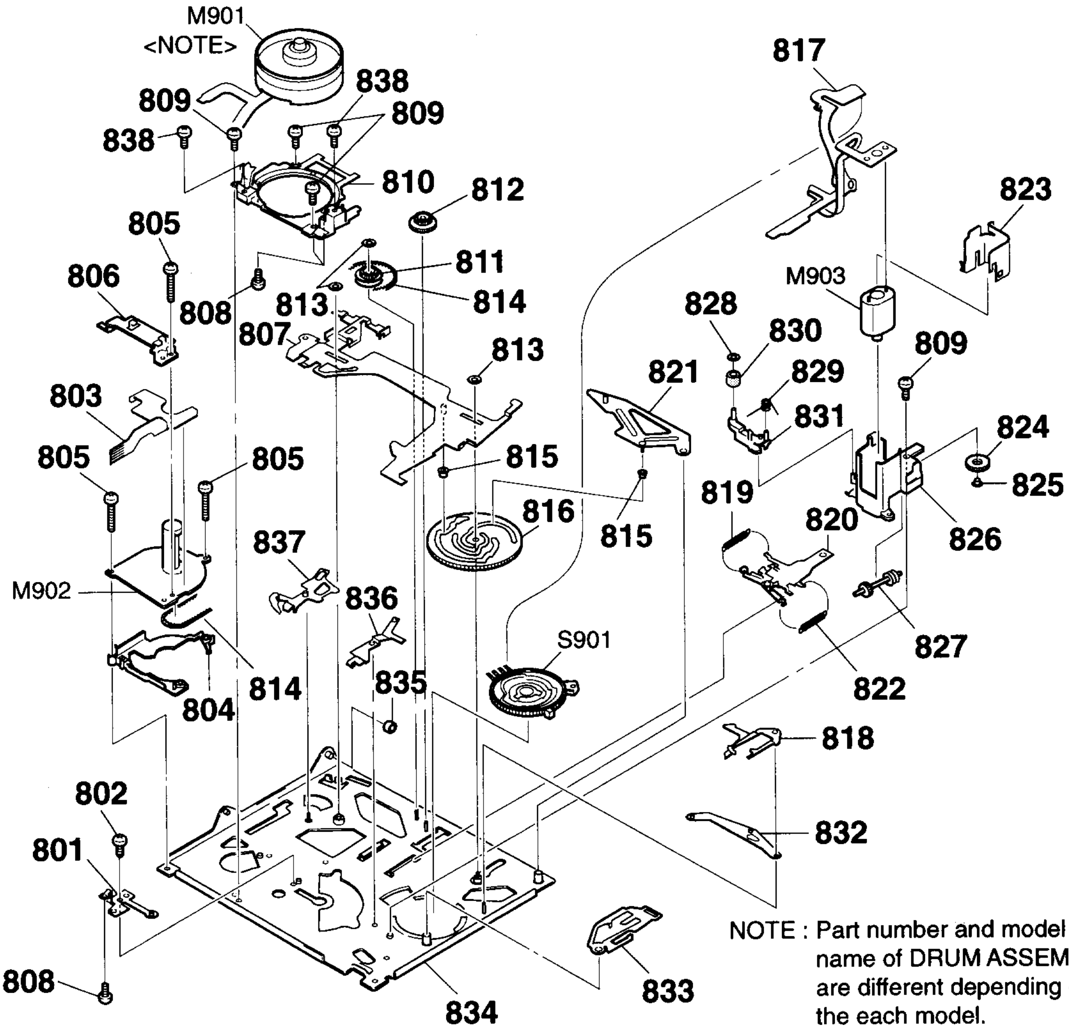
5-3. Mechanism Chassis Block Section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NOTE : Part number and model name of DRUM ASSEMBLY are different depending on the each model.